THE "CONDER" TOKEN COLLECTOR'S JOURNAL

THE PROCEEDINGS OF THE "CONDER" TOKEN COLLECTOR'S CLUB
Volume V Number 2 June 15, 2000 Consecutive Issue #16



The Anglesey Issue
(YCYHOEDDIAD YNYS MON)
by Colin Hawker

Swan Upping

Anglesey Through the Ages by Dr. Warren Kovach

The Parys Mine Company and the Industrialization of Money by Dr. Richard Doty

History of Parys and Mona Copper Mines

Michael Faraday -Tour in Wales -1819

The Pugilists by Richard Bartlett

Notes on the Private Tokens, Their issuers and Die-sinkers by S. H. Hamer





Crude, Used, Charming & Rare Selections from the Emerald Isle

Drogheda 4 BisII - Crude Fine, bisecting obv crack. 3 known. \$295

Dublin 124 - Inverted cypher "H M Co" and "Incorpoated." Fine, uneven recoloring & a few spots. RRR \$149

Dublin 147 - VG, 3 edge dents, usual small obv rust pits. RR \$19

Dublin 177 - Crude Good. \$6

Dublin 224 - 1796; VG, similar sharpness to D & H plate, but lightly corroded. RR \$59

Dublin 241 - Glossy VF, a few tiny nicks. Rev not "as 238," merely similar. Rare \$29

Dublin 245 - Glossy EF. Rare \$59

Dublin 267 - Fine, corroded. \$9

Dublin 267 - Glossy EF, obv flan flaw. \$59

Dublin 270 - "Turner Camac." Good, a couple light obv scratches. "1 or 2 traced" \$29

Dublin 271 - "Turner Camac." VG, corroded. "5 traced" \$39

Dublin 271 - "Turner Camac." Sharp Fine. "5 traced" \$69

Dublin 276 Bis - "Turner Camac." O:As 276, now rusted. R:Unlisted-top of C to center of H. Small break top of H(alfpenny). Fine, bashed center & rim. 5 seen. \$15

Dublin 276 Bis - "Turner Camac." Good, corroded. 5 seen. \$29

Dublin 276 Bis - "Turner Camac." Nice Glossy Fine. 5 seen. \$119

Dublin 277 - "Turner Camac." Good. "3 traced" \$39

Dublin 277 - "Turner Camac." Sharp VG, granular. "3 traced" \$49

Dublin 279 - "Turner Camac." Sharp VG, corroded, rev clash. "1 or 2 traced" \$59

Dublin 280 - "Turner Camac." Fine, rev cracks. "1 or 2 traced" \$99

Dublin 286 - "Turner Camac." VG, rev 45° upset, as always. "1 or 2 traced" \$59

Dublin 289 Bis - "Turner Camac." Fine, light corrosion. RRR \$69

Dublin 294 - "Turner Camac." Fine, rev crack. "4 traced" \$79

Dublin 295 - "Turner Camac." VF, obv crack & small flan flaw. "3 traced" \$99

Dublin 297 - "Turner Camac." Nice VG. "3 traced" \$59

Dublin 297 - "Turner Camac." Fine, a few rev flan pits. "3 traced" \$79

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Introduction

Special Issue! Anglesey and the Druid Penny: This is our first "theme" issue. It began with the accidental discovery of the Anglesey Mining plc website. That's right, after nearly 200 years, the Parys mine of Anglesey is back in business! Some of the articles and photos from the site are reproduced in this issue with the generous permission of AMCo. There is much fascinating information and many photographs on the website (http://angleseymining.co.uk/). Check it out. Some of the articles contain information repetitive to some of our member's articles, but each piece selected also contains some great additional information. Hopefully, you won't find it too much of a good thing.

About the Cover: Mr. Ian Cuthbertson of AMCo. informed me that a new Druid penny had been struck by the company and inquired if I would like a couple. You can guess my answer! A few days later, 2 big beautiful Druids arrived in the mail and thus our cover features the 1991 Druid penny. It is 38mm in diameter and is struck in bronze. Mr. Cuthbertson didn't have at hand specific information about the piece - such as mintage, how many have been distributed, if any were struck in different metals, are any available for sale, etc. . . I will try to obtain this information for a future issue.

ANA Convention: The American Numismatic Association annual convention will be held in Philadelphia August 9-13, 2000. The CTCC will hold it's annual meeting Friday August 11 at 6:30PM in Room 106A of the Pennsylvania Convention Center. After the meeting, all members will be invited to retire to a yet to be determined location for pizza and beverages. We will also have booth #1246. Please be sure to drop by and say hello and if you can man the booth for a bit, all the better.

Token Screensaver: Mike Grogan is in the process of developing a screensaver that will promote the CTCC. It will feature the excellent photographs of Joel Spingarn and will be available as a free download from Mike's webpage (http://grogansite.homestead.com/tokens.html) I have seen a trial version and it is great! If you would rather see images of rare and beautiful tokens float across your screen instead of flying toasters, then check out Mike's site. Also, remember the message board at that site is your official source for CTCC information between issues, so check it regularly.

Distribution Foul Up!: I'm convinced that my computer hates me! I have put the membership roll on a database so that mailing labels can be printed. I printed the list and started assembling journals. I mailed as many as I had finished the first day before the post office closed. That evening as I finished the rest, I ran out of labels before I ran out of journals. Somehow several labels hadn't printed. I ran the database again and it printed perfectly. No matter what I did, I couldn't figure out exactly who got skipped. I sent out a letter explaining the problem to everyone who might have been missed (I hope). If you still haven't received issue #15, please let me know and I will send it out right away. The membership locus also managed to get confused as a result. The locus and new member listings will return next issue and should be correct.

Token Jeopardy

One of our entrants from the last round of token jeopardy said that the first round had been really tough, but he was sure that we would get many correct answers this time. Unfortunately, that wasn't true. Let's just say that those who did enter had a really good chance of winning. Our lucky winner this time was Pete Smith! The answer? Middlesex 480 (Skidmore's piece). Dies aplenty, And mules galore - who muled more tokens than Skidmore? One piece only, To push the store. Skidmore only produced one Genuine Traders Token to be used in and to promote his business - this one. Two ways to warm: One by hitting - one side depicts two men hammering out metal before a forge. The other later, When it's time for sitting - the other shows a register stove. That wasn't so hard was it?

These are beautiful tokens, each worth about \$150. Come on everybody, let's give it a try this time. We have to see better participation to justify continuing Token Jeopardy. I only wish that I could enter! Just to get the ball rolling, the Bard of Tokens, Alan Davisson, has composed another poem for your consideration. This one is <u>really</u> easy! Please send your entry to Harold Welch (address on officer's page) postdated no later than July 3, 2000. "NOTHING VENTURE NOTHING HAVE"!

Tom, Tom, the piper's son That line gives two We still need one. Flip it over And you'll see The name in a banner Of number three. Another clue
In this connection?
The ground all covr'd
With regal rejection.



Photo by Joel Spingarn

The Anglesey Issue (YCYHOEDDIAD YNYS MON)

by Colin Hawker

Two English gentlemen come together in a queue for a coin fair - their first remarks would be about the weather. Two American gentlemen waiting to enter a Conder sale, what should be their first words - how many Druids do you have and what are they like? For without doubt the Anglesey series, being the first of the 18th century trade tokens to appear, was also the best. Described as the most elegant of coins, the simple beauty of the Druid Penny flatters the eye at every glance. In the writer's view, the Anglesey tokens should be the basis of any 18th century trade token collection. Their place in your cabinet should be a numismatic shrine.

Thomas Williams was the managing partner of Parys Mining Company (P.M.Co.), the copper mine at Amlwch on the Isle of Anglesey. He issued the tokens. Williams was a member of the Anglesey Druidical Society. His home at Plas Llanidan overlooked the Menai Strait and also overlooked the fields which were the scene of dreadful carnage between the Druids and the Romans in the 1st century. Anglesey was their last refuge and remains so today. However, Williams was not an esoteric romantic, but a clear thinking solicitor and entrepreneur. He had a brilliant idea, born of necessity! needed to market the mined copper. He needed small change to pay his workmen in various places apart from Anglesey. Furthermore, because of the shortage of Regal copper coin and it's poor state,



THOMAS WILLIAMS

Williams thought that if he produced copper coins far surpassing all that had gone before, then perhaps, just perhaps, he might so influence Pitt and please the King enough to have the honor of securing the Regal coin contract. So, with the help of Collins, Milton and Westwood, the Druid tokens evolved, being first struck and issued from a factory at Holywell in the Greenfield Valley. Overall, the tokens were issued from 1787 to 1792. What do those years tell us?

Matthew Boulton first heard about them in a letter from his friend, Samuel Garbett, in February 1787. They were praised. Reports appeared in the *Universal Register (The Times)*. The first on the 28th March when the penny was strangely described as having the King's head on one side and a Druid's head on the other. A mistake, a bit of heresay or did such a piece really exist? The writer has tried, but cannot discover corroboration. His rather implausible explanation is that it was John Wilkinson's head and not the King's head. Wilkinson believed that he resembled King George III. At the same time in 1787 Williams had also struck the first tokens for his friend Wilkinson. Furthermore, there is evidence that Wilkinson - a vain man - was known twice to agree for a plaster cast to be made of his profile. A mule escaping by accident? I wonder.



D&H 5



A controversy developed over the lovely D. pennies. Did D. refer to 1 denarius or did it honor John Dawes, the partner who provided the banking aid? Very soon Williams moved his press from Holywell and established his mint in the centre of Birmingham at 9 Great Charles Street. He had some initial difficulties there, for in June 1788 he asked Boulton to strike two tons of Druid pence for him. Another report confirmed that Williams had offered to coin for Pitt, so his plan was proceeding. Later, we hear that a new die sinker, J.P. Droz had arrived from Paris to work for Boulton.

That was the year in which the numismatic world was introduced to two gentlemen of great stature and importance, the Welsh solicitor who gave us the wonderful Anglesey coinage and the other, the Birmingham engineer - philanthropist and patriot rightly called "the Princely Boulton". Most of the Druid tokens were struck in 1788,

for Boulton had started to build a new mine and had engaged J.G. Hancock as the principal die-sinker for most of the Anglesey series. Boulton, aware of Williams' overtures to Pitt, made an agreement with the Welshman to buy his presses at Gt Charles St. if his bid for the Regal contract failed. It did fail and the agreement was signed on 3/3/1789.

Boulton's turn now came and in a long letter to Lord Hawkesbury of the Committee of the Privy Council, he pleaded his case. Nothing came of it. In 1789 Boulton's new mint was working day and night producing Anglesey tokens and many others. Meanwhile, his new die-sinker, Droz, had been charged with sinking a die for a Regal Britannia coin. In order to improve his bust of the King, Boulton had instructed Droz to accompany him to Windsor where Boulton was to have an audience with the King. Boulton later recalled that meeting in a letter to a government official. In it he disclosed, "I have left Droz peeping at the King, and ye King peeping at him". One might well imagine that scene of the Parisian die-sinker amid the splendour of Windsor Castle.

The following year, 1790, was a year of illness and frustration for Matthew Boulton. He suffered with kidney stones and his die-sinkers were a problem. He had a mild disagreement with Hancock who had moved away from Soho and was becoming independent. Rambert Dumarest (who did not speak English and had to be contacted through Cabit the translator) was urgently requested to sink yet another Druid die. One can understand Boulton's impatience when the die was not received. At Soho a request from Boulton was taken as an order. Therefore, Boulton was obliged to use a reminder. Still no die was forthcoming - yet another reminder was dispatched. Boulton, like Beethoven, was not afraid of repeating himself! Throughout 1790 Druid dies were to-ing and fro-ing. Thomas Williams and Matthew Boulton were at loggerheads over Druid's heads, so that the output of Anglesey tokens from Soho was impaired.

Williams, now in London, had another option and that was to turn to another die-sinker, his namesake, W. Williams of St. Martin's Lane, for more tokens. The dies were ready and a large number of Anglesey halfpennies were soon being barreled out.

They are identified by having the date <u>1791</u> below the cipher. Meanwhile, back at Soho, Boulton's impasse with Dumarest continued. In desperation Boulton sought to employ the principal Irish medallist, William Mossop, but the negotiations came to nothing. The Soho master had made him a generous offer; the Irishman wanted more. It was considered a cardinal sin to decline an offer and so rebuff "The Princely Boulton". It invoked the predictable outcome. Neither acknowledgment nor reply left Soho!

The last consignment of Anglesey Druid pennies left Soho in the Spring of 1792. It comprised 19 c.w.t. exactly (D&H 255). Can you imagine 34,380 tokens in mint condition trundling along in a cart to the canal wharf? That wharf and the nearby blacksmith's forge can still be found today (if you look hard enough). That was not the last mention of the series in the Birmingham archive. Williams, many years later discovered an unpaid bill in his papers. He immediately sent a cheque to Boulton. The late mintbook entry dated 27th/1/1798 records - Press Account £198.14.8! Williams was still "Tom Fair Play" (TWM CHWARAE TEG). Meanwhile, in the whole of Britain the splendid Druid tokens were accepted as currency.

How many of them were struck?

Anglesev Tokens - Countless

The beautiful Anglesey tokens were struck at Holywell by Thomas Williams, then at his Birmingham mint on Gt. Charles Street by Williams, though later by Matthew Boulton. At Soho by Boulton and then at St. Martin's Lane in London by W. Williams. The estimate in Charles Pye's index in 1801 of "at least 250 ton weight were made at the Parys Mine Company's mint and about 50 ton of halfpence" has been accepted and often quoted by others since that time. The Druids were hooded and reserved - coiners and collectors also were (and still are) inclined to secrecy, so how did Pye reach his estimate I wonder? It is said that all the information provided in Pye's index was, in fact, supplied by Thomas Welch (where have I heard that name?). Welch was also a collector and although reported to be close to the Birmingham die-sinkers, there is no prime source evidence to indicate what knowledge of Soho matters. The writer, who having trawled the whole of the Assay Office (Coinage) papers in the Birmingham Reference Library some time ago, knows that the record of Anglesey tokens sent to the journeyman distributor was lost! Undoubtedly, many millions of superb Anglesey tokens were struck - but how can a total possible be reached? The die-sinkers did not attend the mint, the press shop boys probably could not count! From D&H we find that in striking Anglesey pennies in 1787 - 53 obverse dies were used and 125 reverse dies were used. In 1788 99 obverse dies were used and 125 reverse dies were used, and so on to the halfpennies. We do not, however, know how many tokens were struck from each possible pairing - nor could anyone else have known. So Pye's estimate is at best a very rough guess or at worst Moonshine!

The Anglesey Varieties

The late 18th century coin dealers and collectors who endeavored to catalogue the flood of different tokens being struck, faced an immense task. Sometimes, they confused counties with towns with issuers in their alphabetical lists. Therefore, mistakes occurred.

The Anglesey series, being the first, should have been the easiest to deal with, had there not been so many varieties. Yet it was a hundred years later in 1892 before a sufficiently detailed list was published. We have to thank James Atkins for his *The Tradesmen's Tokens of the 18th Century*. He must have handled many thousands of tokens apart from the details that he accrued from Conder, Pye, etc. He was indebted to the British Museum which held a collection of over 70,000 pieces. However, his oft repeated comments like "O.B. the same as last" made identification irksome. Therefore, when 25 years later, a much improved catalogue appeared, all concerned were quite satisfied. Dalton and Hamer produced the standard reference book we so value today. It is a monumental work beyond any praise. The Anglesey series is so sectioned to an n-th degree, that a searcher can identify any example with ease.

Anglesey Copper Mine

The site of the Parys Mine Co. was on a hill called Parys Mountain, near the port of Amlwch. There is evidence of Roman workings there. Then nothing, until after a brief period of activity in Elizabethan times, the mine was sleeping. Copper was, however, rediscovered there in 1768. Three partners held shares in the mine, the Reverend Edward Hughes, Thomas Williams and John Dawes. The partnership was set up in 1778 and lasted for about thirty years. Williams was the managing partner and because of his brilliance, the Anglesey Druid tokens came into being. With Williams the entrepreneur, the P.M.Co. and his other businesses thrived. Williams soon becoming a millionaire. No wonder Matthew Boulton dubbed him "The Copper King". In the 1780's the P.M.Co. was the largest copper mine in the world. In fact, within that context, Williams emerges not only as the finest industrialist and financier which Anglesey has ever produced, but also one of the few great men of the early industrial revolution in Britain. When John Dawes died in 1788, his son became a sleeping partner. Williams himself died in 1802 at Bath with his sons succeeding him. The P.M.Co. eventually declined and although there was a short lived boom in mining about 1825, in Victorian times mining ceased there altogether. Nowadays, a new consortium called The Anglesey Mine Co. P.L.C. has reopened the mine with much deeper exploratory drilling having taken place. For the technical reader, a fairly recent (1992) estimate of reserves at Parys Mountain is appended and ends this writer's notes.

| CATEGORY | TONNES | COPPER | LEAD | ZINC | SILVER | GOLD | |
|------------|-----------|--------|------|------|--------|------|--|
| | | % | % | % | G/T | G/T | |
| PROBABLE | | | | | | | |
| & POSSIBLE | 6,449,653 | 2.34 | 2.60 | 5.35 | 0.39 | 0.32 | |

Anglesey Druidical Society Etc.

The writer can now confirm that the Anglesey mine magnate, Thomas Williams, was indeed a member of that Society, hence the Druid trade tokens. The Society was formed in 1782 and was soon to have a total of 141 members who represented the leading men of Anglesey, i. e. land owners, the clergy and farmers. However, despite their diversity, they

all might have looked alike when meeting at the Bulkeley Arms in Beaumaris, for in 1790 they resolved upon the adoption of a uniform. It consisted of a plain dark blue coat and blue velvet collar with a yellow metal button with a Druid's head upon it, white waistcoat and breeches and red stockings. Imagine, what a sight, with perhaps fifty or sixty members arriving on horseback, so attired for their meeting. Apart from the society's cultural beliefs and adherence to ritual, they were also a benevolent society. awarded sums of money for bravery, prowess and apprenticeships. Although in 1850 it was wound up because members (all but eight) had passed away. The Society has since been revived and reformed and is now much involved in the Welsh Eisteddfodau. The badge of the present day Society is illustrated. It is a Druidic sacred device called the Awwn or Nod Cyfrif (mystic sign). The three bars or rays of light may be summed up as Will, Wisdom and Love. Meanwhile, the writer is engaged in research for information concerning past Druidical Societies in Britain and the regalia worn at meetings. medallions (or jewels) were issued to members, or awarded to past officers for service rendered. They are silver/gilt, highly prized and much sought after. The writer is pleased to have a small collection, they compliment his large Druid hoard magnificently. Finally, the retiring Archdruid has suggested that the writer applies to be considered for membership of the Anglesey Druidical Society, but that is yet to be formalized -GOBEITHIO!

Anglesey - The Second Paradise, Where the Air is Like Wine!
- Diwedd







THE PARYS MINE COMPANY AND THE INDUSTRIALIZATION OF MONEY

Richard G. Doty*

One of my particular research concerns has been the origins of the mass production of coinage and currency. For coins, this process began in the late eighteenth century, and it was a natural outgrowth of the series of technological improvements which we know as the British Industrial Revolution. Its first and most dramatic step involved the harnessing of steam power to the coining press, a development which had taken place by the opening of the 1790s.

My pursuit into the details of this epochal event took me to Britain for an extended research visit in 1985. The first establishment to which I devoted a portion of my time was an eminently logical one, the Soho, Birmingham operation of Boulton & Watt. Matthew Boulton is generally credited with the invention of the first practical steam-powered coining press, for which he secured a patent in mid-1790.

But the other firm was a much less evident choice. Its activities were shadowy in the extreme, and it was very distant from the centers of the Industrial Revolution. Moreover, it did not have a Matthew Boulton to herald its activities, to advertise its wares. And of course, it never secured a coining contract from the British government — although there were times when it looked as though it might. This second firm was the Parys Mine Company, whose center of operation was the island of Anglesey, off North Wales.

Two circumstances had drawn my attention, and hence my research, in this latter direction. First, Parys Mine struck a huge quantity of coinage within a fairly short period of time. The majority of its pence and halfpence were produced during 1787 and 1788, nearly thirteen million of them (250 tons of pence, fifty tons of halfpence) (1), at a time when its coining facility was fulfilling at least one other order, as will be seen. This scale of production is very difficult to equate with the manually-powered screw press with which the Age of Reason coined its money.

Moreover, the coins (or technically, tokens) emanating from Parys Mine were exceptionally well-struck, heavy pieces. A restraining collar was employed in the elaboration of most of the pence, although the halfpence were not so distinguished. And here is where the second problem arises. A restraining collar was very infrequently employed at that time because, in the absence of an ejection

^{*} Author's note: In 1983, I first had occasion to talk with Elvira Eliza Clain-Stefanelli about a curious feature of Anglesey token coinage which I was then in process of investigating. I found her knowledge of numismatics most helpful at that time; since then, I have come to know her better as a mentor, and as a friend. But when considering a choice of article for the Clain-Stefanelli Festschrift, it seemed fitting to go back to the topic of our original discussion, the money of Anglesey.

⁽¹⁾ A. W. WATERS, Notes on Eighteenth Century Tokens, London: B. A. Seaby, 1954, p. 37.

mechanism, it slowed production to an inadmissible degree. In essence, the one-piece close collar, which is what is used for the production of today's coinage, had to await the introduction of the automatic layer-on and ejector. It is significant that Matthew Boulton, when describing his steam-powered press in the patent papers of 1790, observed that the blanks would be placed on the lower coinage die "either by the person who attends it as usual in coining money or otherwise by some proper contrivance which does not relate to the present purpose" (2). The inventor soon found a way to place planchets on and remove them from the lower die in his press, and he would combine this action with the restraint of the planchets in close collars. He was doing so successfully by the autumn of 1790, which is when it can be said that this new machinery was essentially perfected (3). But it is interesting to note that he did not have such a mechanism prior to that time: had he had one, it would have certainly appeared in the patent specifications. The emphasis on collar-struck coinage at Parys Mine, and the huge volume of pieces so manufactured, suggests to me that the Welsh firm must have addressed and apparently had some success in solving difficulties which temporarily eluded Boulton himself.

And it had done so three years earlier.

The purpose of this paper is twofold. First, I shall discuss the history of Parys Mine and the tokens it produced. And secondly, I shall discuss whether or not it deserves inclusion in the ranks of coining pioneers.

The essential facts behind the creation of Parys Mine itself are sufficiently known, although some details are not exactly as they appear in the numismatic literature. The copper-rich veins near Amlwch, on the island of Anglesey off North Wales, were worked in Roman times, lost for centuries, then rediscovered in the 1760's. Two mines grew up here, on either side of Parys Mountain. These were the Mona Mine (Mona was the name given by the Roman to Anglesey) and the Parys Mine. The Mona concern was never involved in coinage; the Parys operation appears to have supplied sufficient copper tokens for the workers at both establishments (4).

The actual ownership of the mines was fairly complex, changing through time. The Earl of Uxbridge was sole proprietor of the Mona Mine; under an arrangement concluded in 1785, he and Thomas Williams of Llanidan worked it in a 75-25 relationship. There was a reorganization in 1801, after which Uxbridge shared the mine with Williams in a straight half-and-half agreement. Parys Mine was initially owned by Lord Uxbridge and the Reverend Edward Hughes. In 1801, Thomas Williams was allowed into this partnership too, so that it now stood at Hughes with a half share, Lord Uxbridge with a quarter, and the enterprising Llanidan lawyer, Thomas Williams, with the remaining quarter (5). Edward Hughes comes into things because he had had the good sense to marry Mary Lewis of Llys Dulas, who had inherited a portion of Parys Mountain from her father,

⁽²⁾ Birmingham Reference Library, Matthew Boulton papers (hereafter BRL), undated draft "Specification of Coining Mill" in Boulton's hand, in Portfolio 714. This document must come from the middle of 1790, very shortly before the formal submission of papers on the Boulton press, as its language was essentially copied verbatim into the later document. As always, I am indebted to the Senior Archivist in charge of the Boulton papers, Mr John Davies, and to his excellent staff.

⁽³⁾ BRL, Letter Box John Wilkinson, John Wilkinson to Matthew Boulton, 11 December 1790. All of the tokens Boulton prepared for Wilkinson were struck in collar, and, since the 1790 issue was a substantial one, we may conclude that Boulton had perfected the collar, and the laying-on mechanism of which it necessarily formed an integral part, by that time.

⁽⁴⁾ For a more extensive picture of the development of the Anglesey copper industry, see J. R. Harris, *The Copper King: A Biography of Thomas Williams of Llanidan*, Liverpool: Liverpool University Press, 1964; the above paragraph was based on that source.

⁽⁵⁾ Department of Manuscripts, The Library, University College of North Wales, Bangor (hereafter UCNW), Mona Mine MSS. 1267, "Origin & Formation of the Anglesey Copper Cos". I am indebted to that school's fine archivist, Mr. Tomos Roberts, for his cheerful assistance in the gathering of materials on the Parys and Mona concerns.

while Uxbridge had inherited his share of the concern from his father, Sir Nicholas Bayly (6). In all of this, Thomas Williams was the most important of the many individuals involved, and he was the force behind the Parys Mine tokens.

Those tokens came about because of the very success of the enterprise. Parys and Mona Mines could produce abundant copper at a price well below that charged by the Cornish mines of the period. The ore from Parys Mountain existed in the huge amounts, labor costs were somewhat lower than they were in other parts of Britain, and, once the port of Amlwch had been constructed, it became reasonably easy to move the copper from Anglesey to other parts of British Isles. The mines were open-pit affairs, and the extent of the operations is still suggested by the lunar appearance of the local countryside. At peak output in the middle and later 1780's, the various activities spawned by Parys Mountain employed several thousand people. An undated but contemporary source indicated that 1,125 men, women, and children were drawing salaries at Mona Mine alone (7); to that figure, we must add at least as many at Parys Mine, as well as workers at the rolling mills in the Greenfield Valley and at Parys Mine offices in London and Liverpool. In sum, at the height of its operations, Parys Mountain was employing between two and three thousand workers on a regular basis, and even more during periods of peak production.

All of these operatives required payment. The estimate of daily wages for the 1,125 employees at Mona Mine ran to seventy-five pounds: considering that salaries per worker were only one shilling fourpence per day (8), a great volume of low-denomination coins would have been required to meet the payroll there alone.

And at this point in British history, more and more subsidiary coins were being required in many segments of the economy. The country was venturing into the early stages of the Industrial Revolution, which meant above all else that, as large numbers of workers were gathered together in factories far from their original homes, the traditional modes of payment (in kind, in services) broke down. To attract people to one of these new enterprises in the first place, to keep them there in the second, it would be necessary to use the inducement of payment in cash.

This could not be easily done at the time. Low-denomination coinage meant small silver pieces and copper. The Royal Mint struck no silver for general circulation (except for a modest issue of shillings and sixpences in 1787, completely inadequate to the need) between the end of the reign of George II and very nearly the end of that of George III, some sixty years later. It produced copper coinage between 1770 and 1775, then went on holiday until 1821. In short, it was not playing its rightful role in providing the small money necessary to maintain the new economic reality.

But counterfeiters were more than happy to do what they could to take up the slack. Boulton's famous observation in 1789 that two-thirds of the copper coins with which he came into contact were false must be taken with a grain of salt, for he was attempting to obtain a coining contract from the government at the time, and his correspondent had official connections (9). But the evil was real enough all the same, and small fake silver coins joined the ubiquitous copper "Brummagems" in circulation, to the annoyance of shopkeepers and the frustration of the new wage-earners (10).

To these general problems, special difficulties were added for the owners and operatives at Parys Mountain. Even today, it is fairly difficult to get to Anglesey from London or the Midlands; it was a

⁽⁶⁾ J. R. HARRIS, op. cit., p. 21-26.

⁽⁷⁾ UCNW, Mona Mine MSS. 1267.

⁽⁸⁾ Ibid.

⁽⁹⁾ BRL, Matthew Boulton to Charles Jenkinson, Lord Hawkesbury, 14 April 1789, cited in J. S. M. Botterill, Birmingham, Boulton and the English Coinage, in Seaby's Coin and Medal Bulletin, No. 519, August, 1961, p. 303.

⁽¹⁰⁾ J. CRAIG, The Mint, Cambridge: Cambridge University Press, 1953, p. 247.

much more arduous undertaking two centuries ago. It would therefore be nearly impossible to procure the large numbers of coins needed to pay laborers at the mine sites and elsewhere even if the Royal Mint were doing its job of providing coinage. It was not, of course; and when the rudimentary state of the eighteenth-century Welsh banking system is added to the equation, the Parys Mine Company's response becomes eminently understandable: if no money is available, make your own.

The great days of Parys Mine coinage centered on the years 1787 and 1788. There may have been preliminary attempts: undated copper pence exist, which may have been struck prior to 1787 by or on behalf of the firm (Fig. 1, 1). They were the products of John Westwood, who, in Matthew Boulton's jaundiced phrase, was "an ingenious Shabby Fellow" previously associated with counterfeiters of coinage and forgers of Glasgow bank notes (11). Again, we may take a Boulton statement at less than face value: working in conjunction with Thomas Williams, John Westwood would be the Soho industrialist's main competitor for a royal coinage contract for a brief period in the later 1780s. Boulton's estimate of his character must be viewed with this business rivalry in mind. Westwood was to be deeply involved in the Parys Mine token coinage until around 1790.

I originally assumed that ascribing a date previous to 1787 for the undated Anglesey penny prototypes was incorrect. Then I encountered two brief references in Boulton's hand in a notebook he composed in mid-1786. The first stated that Westwood was definitely offering to coin copper halfpennies for the British government by that time (12). The second entry, which appeared two pages later, was an estimate of the hourly rate of production for one of Westwood's presses, twenty-seven halfpennies per minute, or 12,880 per eight-hour day (13). I shall return to this estimate in due time; here, I only observe that if Westwood wished to strike Anglesey patterns previous to the start of the regular coinage, he apparently had some means for doing so.

These trials differed from later issues for circulation. They were not struck in collar, and their edge inscription was unlike those found on dated pieces. The reverse design is unfamiliar to us, while the obverse seems strangely unfinished, the portrait far inferior to that employed for the regular coinage. As to the use of the Druid's head within an oak wreath, R. C. Bell suggests that the inspiration may have come from the title page of Powell's *History of Wales*, 1774 edition (14). But Tomos Roberts kindly offered another source for the image; I illustrate it here by permission of his institution. This Druid's head appeared on the seal of the Anglesey Druidical Society, appended to a letter dated 1 August 1782 (UCNW, Dinan MSS. 239). If nothing else, it suggests that something very close to the image used on the tokens existed in North Wales earlier in the 1780s (Fig. 1, 2).

In 1787, the first of the regular Druid pence made their debut. On 7 March of that year, Matthew Boulton sent one of them to Jean-Pierre Droz, the talented Swiss engraver whose services he wished to engage (15). Their existence was reported in the London *Times* later that month (16), and they received a national exposure in the Supplement to the *Gentleman's Magazine*, published at the end of the year. One genuine and two "counterfeit" varieties were discussed and illustrated by the magazine's correspondent; in reality, all three coins were genuine products of the Parys Mine Company's mint, which the *Gentleman's Magazine* placed in Birmingham (17). I have illustrated the general

⁽¹¹⁾ BRL, Boulton Notebook 51, 1787-1788, p. 17 (entry for 26 March 1787).

⁽¹²⁾ BRL, Boulton Notebook 47, 1786, p. 3. The notebook is labelled "June 1, 1786", and it does appear to date from around the middle of that year.

⁽¹³⁾ Ibid., p. 5.

⁽¹⁴⁾ R. C. Bell, Commercial Coins, 1787-1804, Newcastle upon Tyne: Corbitt and Hunter Ltd., 1963, p. 123.

⁽¹⁵⁾ BRL, correspondence, Boulton to Droz, 1787-1788, Matthew Boulton to Jean-Pierre Droz, 7 March 1787.

⁽¹⁶⁾ Information kindly communicated to me by Mr. George Boon, Keeper of Archaeology & Numismatics, National Museum of Wales, Cardiff.

^{(17) &}quot;New Anglesey Coin", Gentleman's Magazine, LVII, Supplement, 1787, p. 1160-1161.



Fig. 1

types mentioned in that article (Fig. 1, 3-4); the fact that the magazine saw fit to describe these tokens, and the fact that they were known in distant London almost as soon as their production must have begun, indicates they were circulating far beyond the confines of North Wales, a godsend to a national public starved for small change.

Note that Gentleman's Magazine said that the tokens were struck in Birmingham. Virtually every writer since 1787 has included this bit of information in describing the pieces. But I have discovered that there was an earlier mint involved in the project, located in the Greenfield Valley, near the town of Holywell. The source of this observation was Matthew Boulton: writing to his friend and associate Samuel Garbett in late March 1787, the industrialist observed that Thomas Williams "hath got several presses at work at Hollywell [sic] & is making pieces for himself & for Wilkinson" (18). The pieces for Wilkinson were halfpennies, struck in a close collar as were the Anglesey pence (Fig. 1, 5). The article in the Supplement of the Gentleman's Magazine described the Wilkinson tokens immediately after the Parys Mine coins (19); we now see why this might have been the case.

The person responsible for the designs of the Parys Mine and Wilkinson tokens was John Gregory Hancock, Sr. Details of his life are only incompletely known. He appears to have been a resident of Birmingham, born there between 1750 and 1760, active until shortly after 1810. He worked with Matthew Boulton around 1789-1790, and again around 1802-1803 (20). He invented several processes in fields allied to coining, and British patent records include at least two inventions in his name. He also seems to have been a somewhat difficult person with whom to work (21). Whatever his other qualities, Hancock was a gifted artist and designer, and he deserves a great deal more attention than he has commonly received.

As noted, the Gentleman's Magazine put the Parys Mine Company's mint in Birmingham by late 1787. It would be convenient to assume that the transferral of coining activities led to a change in quality or design, and a logical breakdown would be to group Dalton & Hamer varieties four through eleven as Holywell strikes, eleven through eighty-five as Birmingham coinage. Unfortunately, this does not hold up: if one can believe Matthew Boulton, the Wilkinson tokens were also being manufactured in Holywell in 1787, and even cursory examination reveals extremely close similarities between the fabric of the members of this group and that of the later-number 1787 Parys Mine pence. As with so much else in this coinage, we simply cannot say when the move to Birmingham took place, or which members of the Parys group were struck where.

There is corroborative evidence concerning the second mint and it comes from the Boulton papers in Birmingham. A letter from Thomas Williams to Matthew Boulton dated 5 April 1788 spoke of Hancock's designs for the new Anglesey halfpenny issue of that year. Williams sent one of the coins along, observing that he was not completely satisfied with Hancock's work and believed that it might be improved if Boulton were to pay a visit to the artist, show him one of his own products, and stir him to greater efforts (22). The only way in which this letter can be constructed is that Hancock, and hence the Parys Mine Company's mint, were now in Birmingham rather than Holywell: Wil-

⁽¹⁸⁾ BRL, [Private] Letter Book O, M. Boulton, 1783-1788, Matthew Boulton to Samuel Garbett. The press copy in which this information appears is undated, but it occupies pp. 62-63 of the letter book, while p. 61 is dated 27 March 1787 and p. 64 dated 28 March 1787. Elsewhere, in BRL, Notebook 51, p. 15, the date for the letter is given as 28 March.

^{(19) &}quot;New Anglesey Coin", p. 1161.

⁽²⁰⁾ BRL, Mint Book [Number 13], Journal Mint, 1798-1803, p. 233. Here, under date of 22 January 1803, there is a payment notation of six pounds six shillings to Hancock for "Engraving a Dye". The die in question was for the Charleville thirteen pence token dated 1802.

⁽²¹⁾ See, for example, his letter to Matthew Boulton dated 12 April 1790 (BRL, Letter Box H1 [Ha to Hau]).

⁽²²⁾ BRL, Letter Box Thomas Williams, Williams to Boulton, 5 April 1788.

liams is not likely to have urged a sixty-year-old gentleman to make such a visit unless the person to be visited were already in the neighbourhood. In point of fact, the actual location of the mint can be determined by a second letter, written by Matthew Boulton to Samuel Garbett. It is undated; based upon internal evidence, I put it in early 1789 or early 1790. Here, Boulton stated that "Thirty Tons of 1/2 pence have been sent this last week from Birmgm. which were coined at the anglesey [sic] Warehouse in Charles Street & Mr Willms. hath ordered [sic] 25 Ton of Copper now lying in ye Sd. [said] Warehouse to be Coind [sic] into 1/2 pence" (23). I shall refer to this letter again, due to the problems surrounding its date; but it does reveal a precise location for the mint.

The Parys Mine issues of 1788 can be distinguished from those of 1787 by the introduction of the halfpenny (Fig. 1, 6) and a slight descent in quality overall. For pence, the die work seems a trifle cruder, the mastery of the close collar slightly less secure (Fig. 1, 7). The halfpennies, of course, were not struck in collar at all, probably owing to the difficulty of the operation. The Wilkinson issues of that year were so coined, and Hancock and his associates may simply not have had enough time to manufacture both sets of halfpennies in that fashion. In any case, the increased production of Parys coinage in 1788 would have meant that the time spent in striking now assumed a pre-eminent importance.

By 1789, the great days of the Parys Mine coinage were over. There are few hints in the surviving records, but there is a suggestion that the rich copper veins which had called it into existence were becoming exhausted by the early part of that year: Thomas Williams was now complaining of a shortage of copper, and this from an owner of what had been advertised as the nation's richest copper mine (24)! The decline in production had a logical result for the manufacture of Anglesey tokens: Williams apparently decided to sell his coining presses. In a letter from Bristol, dated 19 May 1789, he reminded Matthew Boulton that the two had concluded an agreement so that "I shd. entirely relinquish the Coining with my Presses to-you". He urged Boulton to come to an agreement on the price the latter would pay, suggesting their mutual friend John Wilkinson as mediator (25). Negotiations continued through much of that year. Harris suggests that Boulton did purchase the presses in 1789 (26), but he offers no hard evidence to bear out his suggestion. If Boulton did not in fact buy the presses, it is possible that John Westwood did so, or at least secured their use, for the Westwood-Hancock combination continued to produce tokens, even if it were not working for Parys Mine (27).

And here is where the undated letter cited above enters the equation. If it were written in 1789, its suggestion of an operating Parys Mine Company mint in Birmingham is logical, even though that enterprise might be drawing to a close. But there is some evidence that the letter dates from 1790: in its course Boulton observed that the copper firm of Roe & Company was about to issue halfpenny tokens with the portrait of the founder as an obverse type, and that he, Boulton, was sending one

- (24) J. R. HARRIS, op. cit., p. 88-92.
- (25) BRL, Letter Box Thomas Williams, Williams to Boulton, 19 May 1789 (transcript).
- (26) J. R. HARRIS, op. cit., p. 153.

⁽²³⁾ BRL, [Private] Letter Book Q, M. Boulton, 1789-1792, press copy, p. 132-133. The letter probably dates from early 1790.

⁽²⁷⁾ There is a reference in BRL, Mint Book, Journal Mint to a credit of £ 525 "to T. Williams acct. of presses, for Amt of Coining Presses bot. [bought] of him" (p. 32, entry for 1 March 1792). While no monetary figure appears to have been placed on the Parys presses elsewhere in the Boulton archives, this amount would not seem inconsistent with the prices of used coining presses at the time (say, perhaps, five presses at £ 105 each). If these are the presses whose sale was mooted in 1789, but which did not in fact become Boulton's property until early 1792, it might explain how Hancock was able to strike halfpennies for John Wilkinson in 1790, 1791 and 1792. At present, we cannot tell whether the presses in the terse notice cited above were the same as those which Williams hoped to sell in 1789; but it would make matters a good deal more intelligible if this were the case.

along for Garbett's inspection. Additionally, he mentioned a prototypical halfpenny struck by Westwood for Taylor, Moody & Company of Southampton, whose issue was only averted by his personal intervention with Walter Taylor, head of the firm (28). Both of these tokens bear the date 1790. If the letter comes from that year, does this mean that the Parys Mine Company's Birmingham mint was still in operation? And if so, where are the tokens it produced?

To complete the confusion, one can also read the reference to twenty-five tons of copper still to be struck into halfpennies in another fashion. Earlier in the letter, Boulton stated that Roe & Company "have lately ordered of Mr. Westwood and addition of 25 Tons" of halfpenny tokens, the new strikes "to have the Head of old Roe upon them" (Fig. 1, 8) (29). Is it possible that, when he later spoke of the "25 Tons of Copper" now at the Anglesey warehouse, which Thomas Williams had just ordered turned into halfpennies, Boulton was thinking of new pieces for Roe & Company rather than additional Anglesey halfpennies? If so, it would at least explain the mystery of the virtual nonexistence of 1790-dated Anglesey halfpenny tokens. It would also mean that Thomas Williams was heavily involved, along with Hancock and Westwood, in tokens for issuers other than Parys Mine Company, at a time when he is supposed to have already sold his presses to Matthew Boulton. Clearly, the letter raises many more questions than it answers.

We cannot at present say when the Parys Mine Company stopped making tokens. Some of the 1789-dated pieces probably came from that source, but there is also some evidence that Matthew Boulton was involved in the production of the Anglesey tokens of that year. A letter to Thomas Williams dated 22 July advised him that Boulton "is desireous [sic] of loosing [sic] no time in your Coinage" and requested "the pairs of Dies intended for it", along with the plate copper, blanks, and the coining presses which still formed a bone of contention between the two industrialists (30). As noted above, I have found no evidence that the presses were delivered to Boulton that year, but 1789 halfpennies are identical with 1788's in terms of their fabric, indicating that they were struck on the same presses, whoever owned them at the time.

Production of Parys Mine tokens at the firm's own mint does not appear to have extended beyond the 1780's. A few halfpennies are known from 1790, some struck by a London buttonmaker named Williams (31), others made as patterns by Matthew Boulton, who had finally concluded an agreement to manufacture tokens for Thomas Williams. One of these 1790 trial pieces (probably Dalton & Hammer 380) provoked an angry reaction from the Welshman, who remarked that the obverse portrait

is universally condemned [?] as not in Character & out of proportion [,] the face being much too large for the rest of the Head which some critics say is in so small a compass that it admits no roo m for Brains ... Some say your Druid's Beard resembles a run of Water more [than] a man's Beard (Fig. 1, 9).

He added that Hancock's Druid, employed for previous issues, was far superior and should therefore be copied by Boulton (32) — which was a neat turnabout from Williams' opinion of Hancock's skills

⁽²⁸⁾ BRL, [Private] Letter Book Q, M. Boulton, 1789-1792, Boulton to Samuel Garbett, undated, as cited above. Boulton went on to explain that he had talked Taylor out of the project by telling him that it was unnecessary, since the government would soon be issuing new copper coinage. He also observed that Taylor and others like him would shortly begin the issue of their own tokens if official halfpennies were not forthcoming.

⁽²⁹⁾ BRL, Ibid.

⁽³⁰⁾ BRL, [Private] Letter Book Q, M. Boulton, 1789-1792, Boulton to Williams, 22 July 1789 (transcript).

⁽³¹⁾ A. W. WATERS, Notes on Eighteenth Century Tokens, p. 38.

⁽³²⁾ BRL, Letter Box Thomas Williams, Williams to Boulton, 31 October 1790.



Fig. 2

expressed a scant two years previously. Boulton tried again, producing a better result (Dalton & Hamer 378), and this design was carried over to his extensive strikings for Parys Mine Company in 1791 (Fig. 1, 10). In passing, this was apparently the time when Boulton finally perfected the collar and layer-on mechanism, used in conjunction with the steam-powered press. I recently encountered two 1790-dated Anglesey halfpennies of identical die variety, one struck in collar, and one not. In the letter just cited, Williams also complained that "Your Letters on the Edge are so faint they are scarce legible" (33), which is what one might expect if the restraining collar were too tight, and if it and the laying-on mechanism still needed work. I believe we may therefore put the finishing touches on Boulton's steam press as having taken place at or near the beginning of November 1790.

Matthew Boulton's regular-issue Anglesey halfpennies of the following year were joined by those of the buttonmaker Williams, whose rough, rather crudely executed pieces exist in many varieties. Along with small issue of pennies also struck in 1791, they round out ordinary coinage struck by or for Parys Mine (Fig. 2, 11).

By now, that enterprise was entering a time of troubles. The common method of extracting ore had been to blast away parts of the mountain with gunpowder, then burrow into the exposed rock in search of the ore (34). This type of mining occasioned collapses of still-intact material. A major fall occurred in September 1790, which, exacerbated by the heavy rains that autumn and winter, grew increasingly serious. It effectively halted work at the mine for several months, materially adding to

⁽³³⁾ Ibid.

⁽³⁴⁾ J. R. HARRIS, op. cit., p. 160-161.

the decline of the enterprise (35). Copper would continue to be taken from the mountain for decades, but in steadily-diminishing amounts. The period of Parys' pre-eminence in mining was over, just as its position as a token pioneer had also been eclipsed.

But by the time that took place, there were many other issuers and manufacturers of tokens waiting to inherit its position, for the need for small change was still crucial. Appropriately, a number of these later tokens were close imitations of Parys Mine coins. The first counterfeits may have surfaced as early as the end of the 1780's for pence, the early 1790's for halfpennies, although there is of course no way of telling precisely. They were shortly joined by lightweight pieces for general circulation, inspired by the firm's designs but differing from them in certain respects. The extensive North Wales halfpenny series is a good example of this category (Fig. 2, 12); the "Parys Miners" pieces would occupy the middle ground between derivative tokens and simple counterfeits (Fig. 2, 13).

Finally, there were pieces struck for collectors. Of course, many of the first legitimate Parys Mine issues were intended for presentation rather than circulation (as witness the proof surfaces so often seen on Dalton & Hamer varieties one through eleven), but a rash of new issues resulted from the token collecting mania of the mid-1790's. A Druid penny dated 1784 eventually came to light, and it provoked argument among collectors for several generations (Fig. 2, 14). Peter Skidmore and John Westwood produced "half halfpennies" or farthings for sale, although collectors as early as Pye saw them for what they were (36) (Fig. 2, 15). All of these hobbyists' pieces, counterfeits, and evasions have some claim to kinship with the genuine article, and they are commonly collected along with members of the legitimate series.

At the beginning of this article, I mentioned some aspects of the Parys Mine tokens which have interested me over the years; these center mainly on the fact that a very large quantity of heavy tokens were struck, within a collar, within a very short period of time. I now wish to examine these circumstances more fully. Did the Parys Mine Company's mints enjoy an advantage in the machinery they used to strike their products? Was it of a design so advanced that it carried them beyond the technology of their times? Were they true pioneers in the story of modern coinage? I cannot fully answer these questions, if only because the complete facts necessary to reach a final verdict have vanished over the years. I can only set down bits of evidence on either side, for and against; you must draw your own conclusions.

First, there is Boulton's estimate of the speed of a Williams press in the 1786 notebook cited above — twenty-seven halfpennies per minute. Not enough is known about this figure: it is unclear how Boulton arrived at it, and it is impossible to say whether the coins so struck would be manufactured in collar or out. My own studies indicate that twenty-seven moderate-size coins per minute would be barely possible with a screw press of the type then in general use, but only if a restraining collar were not used. A second figure, mentioned two years later, would revise this estimate downward. Under date of 21 March 1788, a Boulton notebook entry observed that John Westwood had offered to strike copper "in the usual manner", and that "it would require 5 or 6 Presses to Coin 3 Ton a week" (37). If

⁽³⁵⁾ UCNW, Mona Mine MSS. 3545 (Letters from John Price to John Sanderson, 31 December 1790 and 11 January 1791).

⁽³⁶⁾ Ch. Pye, A Correct and Complete Representation of All the Provincial Copper Coins, Tokens of Trade, and Cards of Address, on Copper, Which Were Circulated as Such between the Years 1787 and 1801, when They Were Entirely Superseded; a New Copper Coinage Being at That Time in Circulation, Issued by Authority of Government, 2d ed.; London: Matthew Young, [1801], p. 5.

⁽³⁷⁾ BRL, Boulton Notebook 51, p. 64.

this referred to halfpennies (as it very likely did: securing the Crown's permission to strike such coins was currently on everyone's mind), we would obtain a figure of only about twenty coins per minute if five presses were at work, even less if six were to carry out the job. These estimates hardly support the idea of an unprecedented speed for a Parys Mine press, a celerity which might pardon us for assuming that some power beyond that of the human arm was working the machinery. They may, however, suggest some kind of improved layer-on and ejection mechanism, perhaps combined with a gravity planchet feed on the press. The difficulty here is that while it is perfectly easy to get a planchet to drop onto a lower die automatically, and fairly simple to shepherd it into a collar, it is extremely difficult to get it out of the collar and away from the dies once it has been struck. The power of gravity can be depended upon in the first two instances; it cannot be so employed in the third. The struck coin will have expanded to fill the confines of the close collar, and there it will remain unless forced out (38).

There may be hints in the few surviving records that something unusual was happening, but the records must be used with a great deal of caution. For example, there is a brief phrase in a letter of 30 June 1789 from James Watt to Matthew Boulton that "H. [Hancock] braggs [sic] that he can coin in your way, at half price that you can" (39). My examination of the extant drawings for Matthew Boulton's press suggest to me that he had the majority of his machinery perfected by late 1788 (40); does Watt's letter mean that Hancock, too, was able to strike coinage by steam power? And if it were true in mid-1789, would it have been true at the beginning of 1787, in time for the first Parys Mine pence? Or were these merely the unsubstantiated claims of a troublesome individual? In the last paragraph of his note, Watt advised Boulton that "You should if possible get Mr. P. [William Pitt, the Prime Minister] to make an act making it felony to use These new presses & methods (41). Did this refer to something new, a mechanism which the Parys Mine Company had developed on its own? I am assuming that as an engineer James Watt would have been perfectly aware of the difference between an "old" press and a "new" one; what was there about "These new Presses" that made them such a threat to the Boulton & Watt operation?

The only hint at the appearance of the Parys machinery is contained in a Boulton notebook of 1788. Its author notes that

the Flys [sic] of William's presses are about 5 feet Diamt. the Rims are about 6 Inches broad & 3-1/2 or 4 In thick [.] Hancox [sic] says he can work them so as to strike 1/2 pence with 1/4 of 1 turn" (42).

I freely admit that this reference confused me at first, because the concept of a flywheel tends to go along with the idea of automatic machinery. But not necessarily: at some eighteenth-century mints, a knee-action coining machine enjoyed favor. Essentially, this device was a screw press with a few refinements, and it featured a fly whose diameter would be consistent with the ones mentioned in

⁽³⁸⁾ It has recently been suggested to me by Mr. Ronald Landis of Magnolia, Texas, who is currently experimenting with a simple screw press and close collar, that heating planchets before striking would allow an easy, gravity-assisted ejection from the collar, because the heated planchet would quickly cool after striking and its diameter therefore contract. I lack the background to investigate his theory; but if true, it could have removed a major impediment to the Parys coinage without resort to an improved mechanism.

⁽³⁹⁾ BRL, Letter Box 4 of Watt, James, 1785 to 1791, Watt to Boulton, 30 June 1789.

⁽⁴⁰⁾ See BRL, Folio 714; the great majority of the work appears to have been finished by November 1788.

⁽⁴¹⁾ BRL, Letter Box 4 of Watt, James, 1785 to 1791, Watt to Boulton, 30 June 1789.

⁽⁴²⁾ BRL, Notebook 53, "Coining Money", 1788, p. 89.

Matthew Boulton's notes. Whether or not such a press would have created coins more rapidly than the ordinary apparatus of the day, and whether it could be combined with a layer-on and ejector mechanism, are questions which I am not competent to answer. But one thing is fairly obvious: a press of this type would make it easier to turn a *heavy* piece of metal into the type of token issued by the Parys Mine Company.

Thus far, we have faint indications that improved machinery might have been in use. But they remain hints and nothing more. There is also evidence that that machinery was not a complete success. Boulton consistently underrated the Parys presses: in his letter to Williams of 24 May 1789, he cheerfully observed that John Westwood told him that "yours were the worst Presses he ever saw", not worth the money Williams was asking for them. Boulton added that he only agreed to purchase the Parys presses "for the sake of peace & harmony [,] for 'tis impossible the Presses can be of any use to me whatever, as they are not in any degree applicable to my improved mode of Coining" (43). Was Boulton being brutally frank here, or was he attempting to eliminate a dangerous rival at a bargain price?

Earlier in the same letter, Boulton observed that, when he visited the Parys Mine Company warehouse in Birmingham, he was led to believe that the mint there was unable to "get forward as fast as you wanted with Coining", with a bottleneck between the blanking and the striking processes, leaving foreign orders unfilled (44). If this remark were not occasioned by envy or fear on Boulton's part, we again have evidence that all was not well at the Parys Mine establishment.

In sum, the surviving correspondence appears to point both ways. The Parys Mine Company may have been using some form of improved machinery to strike its tokens, but this was not without attendant difficulties. If I were forced to describe the new apparatus in question, I would hazard the guess that it was semi-automatic, incorporating a flywheel and a layer-on, perhaps in tandem with an ejecting mechanism. But I believe that it was operated by a human agency, and not by the power of the steam engine. For the present, Matthew Boulton's reputation in that regard must remain secure.

⁽⁴³⁾ BRL, Letter Box Thomas Williams, Boulton to Williams, 24 May 1789 (transcript).

⁽⁴⁴⁾ Ibid.

Anglesey through the ages



Anglesey is rich in prehistoric remains. The first evidence of humans on the island comes from the Mesolithic period, about 7000 BC. Throughout the next several millennia, the various tribes that occupied Anglesey erected numerous stone burial chambers, standing stones, and hill forts, many of which survived the ages in good condition and can be visited today.

Archaeologists have uncovered many sites on the island rich with prehistoric artefacts such as pottery and stone tools. One of the most spectacular finds was that at Llyn Cerrig Bach. In 1943, land was being cleared near this lake for building a runway for the nearby Royal Air Force base. Peat was being dug from the bog near the lake and an iron chain was found. This chain was used for a while for pulling vehicles that were stuck in the mud. It was soon discovered, though, that the chain was actually an ancient one that was originally used to chain slaves together. Further investigation uncovered a trove of scores of items ranging from iron spearheads and parts of chariots to a bronze trumpet.

These items date from the height of the Celtic era (second century BC to first century AD), just before the time when the Romans occupied Wales. The place where the items were found was at the base of a small cliff overlooking what is now bog but would at that time have been open water of the lake. The Celts apparently had a tradition of sacrificing valuables by ritually casting them into a lake; they would particularly do this after a victorious battle. This explains the predominance of military equipment in the Llyn Cerrig Bach hord.



Roman occupation

At the time of the Roman occupation of Wales (first century AD),

Anglesey was one of the last strongholds of the Celts and their druidic priests. The Romans decided that it was vital to invade Anglesey and destroy the Druids, who were maintaining native resistance against the Romans. The Roman historian Tacitus gives an account of the ensuing battle on the shores of the Menai Straits:

By the shore stood an opposing battle-line, thick with men and weapons, woman running between them, like the Furies in their funereal clothes, their hair flowing, carrying torches; and Druids among them, pouring out frightful curses with their hands raised high to the heavens, our soldiers being so scared by the unfamiliar sight that their limbs were paralysed, and they stood motionless and exposed to be wounded.

The Romans eventually won the battle, subdued the Druids, and cut down their groves of sacred oaks.



Post-Roman history

After the Romans withdrew in the 4th century Anglesey came under the influence of the Kings of Dublin. Numerous raids occurred and it is likely that Irish settled in parts of the island. The island has numerous stone remains of round house foundations that date from this time. They traditionally are called *cytiau'r Gwyddelod* ('huts of the Irish'), although there is no evidence that these were actually occupied by Irish settlers. Eventually war broke out around 400 AD in which the Welsh, supported by Celts from the north of England, vanquished the Irish from the island.

The collection of Welsh traditional tales, *The Mabinogion*, tells the story of Branwen, daughter of the King of North Wales, who lived at this time. One of the main royal seats was at Aberffraw on Anglesey. The King of Ireland, Matholch, came there to marry Branwen and took her back to Ireland. This marriage, though, was not enough to calm the tensions between the two kingdoms. Branwen was ill treated in Ireland and sent word of her woes back to Anglesey. War then broke out between the two kingdoms and Branwen was returned home, but only after great loss of life on both sides. On her arrival back to Anglesey, Branwen died of a broken heart that she should have been the cause of such destruction.



The Middle Ages

The early medieval period saw the flourishing of the Celtic Christian church throughout Britain and Ireland. Anglesey was no exception and two main monasteries were founded; St. Cybi's at what is now Holyhead, and St. Seiriol's at Penmon, in the north-east corner of the island. Viking raids during this period caused much destruction at these settlements, as well as at the royal court in Aberffraw. However, after the end of Viking activity in the 12th century Anglesey flourished. Many of the churches on the island had their beginnings at this time. A number of these medieval churches are well preserved and still in use today.

Another of the main royal courts at this time was at Llys Rhosyr, near present-day Newborough. The site of this court has been discovered and archaeological excavations have been going on since 1992. Details of what has been discovered at this site are on the *Current Archaeology* and Mentor Môn web sites.

The 13th century saw conflict between Wales and her neighbour England, which was now ruled by the descendants of the Norman invaders. Edward I of England twice launched campaigns against Llywelyn ap Gruffydd, the last Prince of Wales. In both cases Llywelyn was defeated in part because Edward cut off grain shipments from Anglesey that were feeding the Welsh army. After the final defeat Edward built a series of castles around the coast of Wales to subdue the natives, including Beaumaris Castle on Anglesey and Caernarfon Castle, just across the straits on the mainland.

Anglesey has links to one of the royal dynasties of British history. A prominent medieval family on the island was that descended from Ednyfed Fychan, the right-hand man of Llywelyn the Great, grandfather of Llywelyn ap Gryffydd. One of his descendants was Owain Tudor, who was born on Anglesey at Plas Penmynydd. Owain joined the court of Henry V and, after the King's death, secretly married his widow. This act gave their grandson, Henry, a claim to the throne. In 1485 Henry and his supporters met King Richard III in battle on Bosworth Field in Leicestershire. The King was killed and Henry was crowned Henry VII. This was the start of the Tudor era and the House of Tudor, which include Henry VIII and Elizabeth I.



From the 18th century onwards Anglesey became important for two reasons: copper and travel to Ireland. Parys Mountain, in the north-west of the island, had been a site of copper mining during the Roman period and possibly much earlier. In the 1760's full scale mining was begun there to satisfy demands for the metal for production of guns, metal plating for ships, and coinage. At its peak Parys Mountain was the largest copper mine in the world and employed 1500 people. The end of the Napoleonic wars meant a reduction in the demand for copper and a sudden decline in the fortunes of the mine. Today virtually the whole inside of the mountain has been removed and the area looks like a lunar landscape.

Many of the coastal bays on Anglesey had served as small ports throughout the ages, but by the 18th century Holyhead had emerged as the main port, primarily because it is the closest point to Ireland. At this time travel to Ireland was hazardous; not only was there the crossing of the Irish sea, but ferries had to navigate the treacherous currents of the Menai Strait to get to Anglesey from the mainland. Travellers from England also had to negotiate the narrow roads through the Snowdonia mountains and around the headlands along the North Wales coast. The union of Great Britain and Ireland in 1800 increased the need to make this route easier to travel. In 1810 Thomas Telford was commissioned to build a new road through North Wales and across Anglesey. This included the first major suspension bridge in the world, the Menai Bridge, across the Menai Strait.

The coming of the railways several decades later lead to competition between Holyhead and the town of Porthdinllaen, on the Welsh mainland, for the primary rail route leading from London to a port serving Dublin. Holyhead won the honour (by a single vote in the House of Commons, according to legend). Subsequently a rail bridge, the Britannia Bridge, was built by Robert Stephenson in 1850.





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History of Parys and Mona Copper Mines

The Mona and Parys copper mines were located on Parys Mountain about two miles south of Amlwch in Anglesey. The original name of the area was Mynydd Trysglwyn which is thought to mean a hillside covered in a thick grove of rough trees covered with scaly lichen growth.

In 1406 a Robert Parys was appointed by the King to collect taxes and fines from the people of Anglesey who had supported the uprising of Owain Glyndwr. As a reward for his efficient collection of taxes he was given Mynydd Trysglwyn which later became called after him. At this time the only asset on the mountain was the farm of Cerrig y Bleddia.

Over the next 300 years the area was passed down the generations until in the rnid 18th century the area was held by two of Anglesey's largest landowners. The eastern area was owned and farmed by the Bayley family of Plas Newydd. The western half of the mountain was jointly owned and farmed by Bayly and by William Lewis of Llys Dulas. The boundary between the two properties was indistinct. In 1762 the Bayly family took a lease on the whole of the Parys farm area of the mountain.

Prior to the 16th century all gold, copper and other precious minerals mined in Britain were automatically crown property. This was a disincentive for mining operations to be carried out. During the 16th century the need for brass for the woolen industry was increasing rapidly.

In addition brass was required for cannons as the Tudor Kings did not want to depend on the import of copper for their weapons of war. In 1564 Queen Elizabeth gave a patent to work copper ore to produce the metal using methods developed in Germany. On 28th of May 1568 the "Mines Royal" company was formed to bring in the skills of the copper workers from other areas of the continent and to develop British copper mines. The Mines Royal were given exclusive rights to mine for copper.

A Mine Royal was a mine (Owned by the Crown) that had deposits containing Gold or Silver in quantities that could be extracted. Many of the mines in Wales at this time whilst extracting lead ore were primarily being worked for the Silver content of the ore. Large amounts of Silver were sent to London at the end of the 16th Century largely from the great vein at Cwmsymlog Mine. The Mines Royal continued to hold a monopoly on mines containing Silver (this included most of the working Welsh Mines) until 1693 when 1693 Royal assent was granted to an Act which removed the Crown ownership of mines containing Silver or Gold

The main ores mined were silver,gold and lead,copper working at that time was a commercial failure. The best average annual production was probably around 21 tons of copper metal up to 1615 and between 1640 and 1680 a total of 40 tons at best. There was no real demand for copper at that period and the Mines Royal copper smelting operations only survived on the silver they extracted.

Copper production in England and Wales did not take off until the 1690s with the help of the reverberatory furnace and new uses to stimulate demand.

http://www.rhosybolbach.freeserve.co.uk/history.htyn

In 1693 the monopoly of copper mining was removed from the Mines Royal and privateers were allowed to start to prospect for copper and other minerals. By the early part of the 18th century there is evidence that some copper mining prospectors were active in Anglesey and other areas of Anglesey and North Wales

There is evidence that some areas of Parys mountain had been subjected to the fire setting techniques of Bronze age man in an effort to gain copper for making crude tools. The remains of Bronze age bell pits can also be seen on the mountain.

It is known that the Romans had mined some areas of Parys mountain for lead and copper

When the Romans left Britain copper mining went into the dark ages.

From this is can be assumed that the presence of at least some copper bearing ore in Parys mountain had been know about for some time. However the was no incentive for private money to be invested to develop the area.

In 1579 a Mr Medley had carried out experiments to precipitate copper in the streams which ran out of the mountains. A "Great mineral works" was built but never became a commercial operation. Details of the process are described by Sir John Wyn of Gwydir.

"The experiment was made in the presence of Burghley, Leicester and Waishingham and other Lords of the council" (i.e. all the important men in the Kingdom at the time)

The result of boiling a great cauldron of the coloured waters from the mine was to produce " alum, copperas and transmute Iron into Copper" This "magical" property of changing one metal Iron into another Copper was held up as a great example of Alchemy.

There is a reference to "The Prince's mine at Trysglwyn" in 1698.

In 1706 a visitor in North Wales noted that the mountain yielded "a sort of earth which of which they make Alum and Copperas"

In 1748 <u>Lewis Morris</u> in his dairies noted that the mountain " produced an Okery earth which is used to make paint" There was no mention of copper.

In 1760 Dr. John Rutty gave an address to the Royal Society on the "Vitriolic liquors" flowing out of the mountain. They were said to be of benefit for curing ulcer's, itches, internal hemorrhaging, worms and diarrhoea.

By 1761 various preliminary search for under ground ore were being made in the Amlwch area. It is known that Cornish miners were active at Drws y Coed in Snowdonia. There is also mention by Lewis Morris that some were prospecting in Anglesey including Rhosmynach and Parys.. A Cornishman called James Thomas was said to have already mined some ore at Parys and sent it to Warrington for smelting.

In the same year the Steward of the Arch Deacon of Merionydd was also carrying out a careful search of the Parys Mountain area. It is reported that his horse stumbled and fell into the remains of some previous workings on the mountain.

One of the areas being investigated was that of Cerrig Y Bleiddia farm were Alexander Fraser had began to look for ore for the Bayle family. A number of shafts were sunk in the area now known as Hen Waith. Copper was found but flooding was always a major problem.

Alexander Fraser was a Scot who had fought with the Jacobeans in 1689 against the King. In 1692 he fled Scotland when he killed a piper for playing an anti-Fraser clan tune. He initially went to the Marquis of Powis who had Jacobean tendencies. It was here that Fraser learnt his mining skills. In 1761 it is reported by Lewis Morris that "A Scot called Fraser was working the Copper mines at Rhos Mynach"

By 1764 Bayly had almost given up on mining for copper on his land. He entered into a lease arrangement with Roe and Company from Macclesfield. They were given the right to mine for 21 years from October 1764 at the eastern end of Parys mountain and also at a Lead mine at Caernarfon. It was the later lead mine that held the greatest attraction to Roe and company at the time.

The land at Cerrig y Bleddia was searched for a number of years and although copper was found it was always in difficult to work, wet veins. One last exploration was started in February 1768 under the direction of Jonathan Roose. This was successful and a rich vein was found on 2nd march 1768 close to the previously named golden venture shaft. This lead to the open cast working in Mona mine. The miner who discovered the lode was called Roland Puw and for his work he was given a rent free cottage for life. Jonathan Roose is buried in Amlwch church yard.

By 1770 the vein had been extended onto the land belonging to Parys farm. This caused increasing bitter legal disputes about the boundary between the owners of the farms. On the one hand Sir Nicholas Bayley who owned the Mona land and Rev Edward Hughes who half owned Parys farm on the other. One man who played a large part in the legal disputes was Thomas Williams (Twm Chwarae Teg or Tom Fair Play)

As well as the newly started open cast and under ground mine the precipitation process was being used at Mona mine. In 1772/3 large amounts of scrap iron were being transported from London to be used in the precipitation pits.

Thomas Williams was bom 31/5/1737 at Llansadwm in Anglesey to a minor land owning family. He became a lawyer and was first used by Edward Hughes in 1774 to try and untangle the legal disputes about the boundary of the Parys and Mona lands.

Thomas Williams legal work led to the formation of the Parys Mine company in 1774. With Jonathan Roose as his technical expert. Over the next few years his influence and skills grew. He also formed alliances and eventually also gained control of the Mona mine. Between 1787 and 1792 his influence grew until he had complete control of the Anglesey and Cornwall copper production.

In 1778 a new company was also formed by John Champion to extract brimstone from the ores on the mountain side. Also at this time the Reverend Bingley visited the mines and left us with one of the earliest written records of conditions at the mine.

Thomas Williams had copper warehouses in London, Birmingham and Liverpool. He erected smelting works on coal fields in South Wales and Lancaster. This was important as Anglesey coal was poor for smelting and each tonne of ore needed 3 tonnes of coal. He campaigned vigorously for the reduction in duty on coal carried by coast to try and improve the smelting and pumping costs at the mine. he did so much in the copper industry throughout the UK that he has been called "The Copper King"

Copper works were built at Flint and Penclawdd to make copper and brass products. Many of these materials were for use in the African Slave trade. Thomas invested £70,000 in this trade and petitioned parliament in 1788 when a bill was being discussed to prevent British Ships carrying slaves.

Thomas Williams also introduced the use of copper bolts to fix the copper sheathing to Naval vessels and seem to have sold then to all sides in the naval conflicts.

The copper and wire works at Greenfield near Holywell also produced the copper blanks for the Parys mountain penny which were struck in Birrningham and London.

At Mona mine the old 21 year lease to Roe and Co had expired in 1785 and a new company was formed. This was know as the "old" Mona Mine company and was still confined to the Cerrig y Bleddia area. Thomas William's became a partner in this new company when Bayley sold his share to a London Banker called John Dawes.

Under the Roe and Co lease only the best parts of the mines had been worked. Towards the end of the lease the whole area had lacked investment and had poor facilities.

Under Thomas Williams direction new buildings were built at Mona and a new quay built at Amlwch Port. Between 1785 and 1788 over £61,000 was invested in the Mona mine. This investment was well repaid over the next 10 years as new areas were opened and the Zenith of the combined mines production was reached. During these years 1200 people were employed at the two mines.

Thomas William's died in 1802 and over the next 5 years the production of copper at the mines dropped dramatically. By 1808 only 120 men were employed. The rapid drop in production was partially due to the end of the workable areas of the Open cast and partially because of a reduction in the market for copper.

In 1811 the control of both mines passed to Lord Uxbridge of Plas Newydd and the same year the "new" Mona mine company was formed when John Vivian of the Swansea copper family took a controlling interest in the mines. With the great open cast worked out more traditional underground areas had to be opened up. This was the period of an influx of Cornish workers the most important of which was James Treweek.

Treweek became the new Mona mine Manager in 1811 and moved with his family to Mona lodge in Amlwch. He was in charge of the mine and transport to and from the port. He was also in charge of hiring and firing at the mine. This gave him great power and lead to complaints of nepotism. He was responsible for the setting of the price to be paid for each area of the mine to be worked. These "bargains" were publicly set every fortnight with a " Dutch auction" method

being used. The lowest bidder getting the work. It was around this time that Michael Faraday visited the mined and recorded what he saw in his diaries.

Transport from and to the mine was by cart. For the Mona mine a local farmer Williams Hughes of Madyn Dysw had a monopoly for over 20 years. However at Parys mine other local farmers could also carry.

By 1828 Treweek was also in charge of the precipitation pits at the mine and his control was extended to the operation of the Parys Mine. A few years later he was in control of all aspects of smelting at the mine and at Amlwch port and was also responsible for all movement of shipping for the mine in the port area. He reported to Sanderson who was Lord Uxbridge's estate manager. Treweek held control of all these aspects of mine operation until his death in 1851. His family then took control and were also influential in the Amlwch ship building industry which developed in the middle of the 19th Century.

The demand for copper was low in the early years of the 19th century and the Mona mine had difficulties paying its way. However under Treweek the mines did expand by the new methods of digging deeper shafts and using engines to dewater the mine. In 1829 16,400 tonnes of ore was raised annually. This however was only 50% of that raised during the time of the great open cast.

Many of the methods and Supervisors during this period came from Comwall. It was a constant complaint that the Mona mine supervision were mainly outsiders while the Parys mine had more local officials.

Despite the problems from 1817 to 1823 the Mona mine produced a good quality and quantity of ore and was making a healthy profit under the supervision of the Thomas Tiddy who was appointed by Treweek in 1819.. However by 1829 the price and demand was dropping again and the numbers employed at the mine was reduced. By around 1830 many of the precipitation pits were abandoned. In 1860 Tiddy attempted to cut the Mona Mine workers wages, however a strike resulted. Tiddy was forced to hide in the Cerreg y Doll engine house. All the miners at the time were in a prayer meeting, the boiler of the engine house blew up. This was the last straw for Tiddy who left the mine soon after. He was replaced at the Mona mine by another Cornishman Captain Trewen. However he also provoked the miners into another strike in 1863.

When Treweek came to Amlwch the smelters were only seen as a means of concentrating the ore. Treweek saw there potential in there own right. He paid particular attention to their development and even started to bring in ores from other parts of the country to smelt with the local ores. By 1820 the Mona mine had 16 smelter furnaces and the Parys works 9. The output of each group of smelters was around 350 tpa. As the production from Mona and Parys mines dropped additional material was brought in form other parts of Britain.

At Parys mine the exhaustion of easily won supplies also lead to a reduction of output in the first part of the 19th century. Until in 1832/4 a new rich vain called the North Discovery lode was found which lasted until around 1840. After this many workmen and woman from Parys moved to the Drws y Coed mine in Snowdonia.

The exact position of the boundary between the Mona and Parys mines was argued over for many years. in September 1835 a court ruling meant that Parys mine gained 2000 square yards of land from the Mona Mine.

By 1840 much mining had finished and the whole Amlwch area was impoverished. The area was also hit by Typhus fever due to malnutrition. In 1846 Charles Dyer was the mine supervisor the remaining miners went on strike to try and increase their miserable wages. However the area remained poor until towards the middle of the Century another good copper vein was discovered and some work returned to the mine.

In 1847 James Treweek was followed as Manager of the mine by his son John Treweek. The amount of copper raised at the mine improved and by 1858 the people of Amlwch were in a much better state of health.

A new act was past in 1850 which meant that all injuries and deaths in the mine had to be reported to inspector. The first mine inspector in North Wales was Thomas Fanning Evans.

The Mona mine was leased to Thomas Fanning Evans and John Wynne Paynter for 31 years on 20/4/1866. ore production was fairly consistent. Part of the smelter works was leased to Henry Hills. In 1880 Mona Mines Ltd took over the assets with Robert Oldrey as principle share holder. Work was started on the Lemin shaft. However the company was wound up in 1885. The company was merged with the Parys Mine in 1899 to form Mona and Parys mines Ltd. Activity was concentrated at the precipitation and ochre works at Dyff-ryn Adda.

Closer ties were made with the copper smelters in the Swansea vallff.

Other merchants were able to make a living off the miners and other works such as Mr. Hills fertilizer factory were also providing employment.

Between 1858 and 1870 Captain Dyer was the Chief manager at Parys Mines.. The company operated under the name of Parys Mines Company Ltd. It is estimated that around \$\mathbb{Z}400,000\$ profit was made for the mine owners at that time. However things went down hill again after 1870 when the lease was pasted to Parys Mines Reconstructed Ltd. Some of the engineers like Captain Trevithick and

Williams left the mine. The company name was changed to Parys Mountain Mines Ltd. In 1877 the Morfu du portion of the lease was sold to the Morfu Du mining company.

Charles Dyer died in 1879.

A new company called the Parys Copper Corporation and run by Captain Thomas Mitchell from Cornwall took over the operation of the Parys mine on 24 March 1879. Work was mainly confined to the 90 fathom level of the Carreg Y doll lode. The remaining ore was difficult and costly to remove. Over the next 4 years production dropped as low as 5665 tonnes of ore and 3090 of ochre and umber. This by 400 workers. The Parys Copper Corporation was wound up in 1885 when the Parys and Morfu du mines remerged.

In 1879 a local committee was formed to try and support the poor of the parish once again. the company was also in financial difficulties and it was mainly the Ochre pits that were worked.

There was also an attempt to work under ground at the bottom of the Open cast sits. New deeper mine tunnels were dig. The tunnels at Mona mine had some success but those at Parys mine were found to be too costly, the companies income for 1878 was only \$\mathbb{\cute}2000\$ against \$\mathbb{\cute}4000\$ expenditure.

The leases and equipment was sold to another company. However it was difficult to raise money and in 1880 the company was sold yet again. This time to a Mr Fanning Evans and Wynne Paynter who sublet the mines for others to work.

One of the companies imported an expensive furnace from America. After a few days the molten ore had solidified in the pipes blocking them. Inspection by the manufacturers said that the ore was too stony and unsuitable for treatment in a furnace.

In 1892 Mr Fanning Evans owned the mine and employed 31 miners under ground, 126 on the surface and 34 with ochre. Output was 265 tons of copper precipitate worth £3090, 2150 tons of Ochre and umber worth f4870 and 470 ton of stone worth £850. The Parys mine joined with the Mona mine in 1899 to form Mona and Parys Mines Ltd. Activity was concentrated at the precipitation and ochre works at Dyff-ryn Adda.

By the 1901 census 141 worked at the mine producing only copper and ochre from the pits. Mr T.F.Evans was the mine manager in 1921 when a receiver was called in. In 1928 companies house were informed that the mines were now run by a private company.

A small number of shafts were still worked at the Morfa ddu mine on the Parys farm and the precipitation ponds near to Dyffryn Adda were still in use as late as 1904.

It has been estimated that between 1768 and 1904, 3.5 million tons of ore had been removed to give around 130,000 tons of copper metal. Around 20 km of under ground tunnels were excavated.

Exploration using modem techniques recommended in 1955 by Anglesey Mining Exploration Ltd.and has continued since then. The Anglesey Copper Mines (UK) LTd continued until 1962 drilling 11 surface boreholes. Initial searches were again for copper bearing ore.

The Canadian Industrial Gas and Oil Company Ltd (CIGOL) drilled 52 bore holes over 4 years from 1966 but no promising reserves were found.

However in 1973 the existence of a high grade polymetalic ore deposit in the engine zone was discovered by Cominco LtD. It was estimated that the reserves were 4.8 million Tonnes of an ore containing 1.5% copper,3% lead,6% Zinc and small amounts of gold and silver.

Based on these results a new shaft (The Morris shaft) was sunk by The Anglesey Mining Corp in 1988.

An experimental processing plant was also built. This has increased the known reserves in the mine to 6.5 million Tonnes. Further experimental drillings are planned.

MICHAEL FARADAY - TOUR IN WALES - 1819

THURSDAY JULY 29th

We were disturbed this morning about 7 o'clock by a sad noise in the inn and were induced to get up about half an hour earlier than we otherwise should have done to ascertain its cause. On entering our breakfast room we found an elderly gentleman, shaving himself by the side of the cups and saucers. He however shifted to the window seat on seeing our intention of taking a meal and in a few minutes we found out from his information that the Dublin Packet bound for Liverpool and which sailed yesterday had been so much retarded by contrary winds as to put into Amlwch and set some of her impatient passengers on shore. Five or six of them had taken the inn by storm and occasioned the noise which disturbed us. They had sent to Gwyndy, a town 10 miles off for Post Chaises, intending when they arrived to proceed to Bangor Ferry.

We were sorry to find the wind easterly for it had been our intention to leave Amlwch in one of the trading vessels and go over to Liverpool, but now that plan was abandoned and we made up our minds to walk as before. We had scarcely finished breakfast when Captain Leaman called for us to go to the Mountain and mines. We were ready in a moment and having settled accounts, shouldered our bundles we bade adieu to Amlwch.

The Mountain is about 2 miles from the town. Our path was along a very dusty, dirty road for when bad it is mended with slag and cinder and as there are always 12 or 14 carts moving backwards and forwards on it these materials are soon ground into black and disagreeable powder. There are no trams used on these roads or in the mines in consequence of the corrosive effects which the waters from the workings would have upon them and which would destroy them in a short time.

Captain Leaman took the utmost pains to explain everything to us and made the time pass so agreeably that we were at the mountain before we knew it. The first thing we came to was a small steam engine employed to drain one of the workings of the mine. It was good and preserved in very neat order within the house, the outdoor parts were of timber. The water here raised from the mine is suffered to run away not being rich enough in copper like some of the others to pay for the separation of the metal. The miners found themselves at first very much embarrassed in working this engine in consequence of the peculiar nature of the waters in this neighbourhood. For being a solution of sulphate of copper they acted on the cylinder and other iron parts of the engine rapidly corroding them and rendering the whole useless. Now they very carefully collect the waters from the higher part of the mountain where they are more free from sulphate of copper, and they neutralise what portion of that salt may be in them with the acid also that they contain by lime and they also preserve the condensed water and cooling it in reservoirs use it over and over again.

Close to the engine were several shafts and at one of them, a Whimsey, at which a horse was drawing and raising ore, the ore being placed in large wooden buckets hooped strongly with Iron in the usual manner. The men are all paid piece work receiving so much per ton for the ore they raised either more or less according to its quality. Captain Leaman, who is a cornish miner, astonished the natives by showing them that dirt would stick in he bottom of the bucket. The smaller parts of the ore had

adhered to the bottom and gradually accumulated so much as to make the bucket about half a hundred weight heavier than it needed. Though they raised and lowered this over and over again and consequently work a good deal without being paid for it, they were quite astonished at the thoughts of cleaning it out now and then though for their own ease and stared prodigiously at seeing large lumps fall off on the sides being struck with a hammer.

Whilst Captain Leaman arranged his morning affairs and procured us clothes for the mine, we rambled about among the workmen. The ore is raised from the mine by the whimsey in large heavy masses and is then thrown over a stage onto the ground below where it comes into charge of the cobbers, principally women and boys. We came up to a large group of these, about 8 or 9 women were sitting on the ground in the midst of heaps of ore of the large and small, their mouths were covered with a cloth to keep the dust of the ore from entering with the breath. The fingers and thumb of the left hand were cased in strong iron tubes forming a sort of glove. A large hammer was handled in the right hand and a block of ore placed before them served as an anvil. Thus furnished they were employed in breaking lumps of ore into small pieces and selecting the good from the bad. The good gradually accumulated into a heap before them being the produce of their labour and the earthy and stony parts are carted away. The boys assisted them by fetching lumps and by selecting the broken portions. Altogether they formed an amusing but not an enticing group. These, and indeed all who work at the mines, are paid piece-work according to the quantity and quality of what they produce an assay master being employed to ascertain the latter and overseer the former.

As soon as the boys saw that strangers were there they began to select bits of ore and offer them to us cap in hand, and by the time we returned to the office there was a large parcel of them about us each with his specimens. We had them all into the office and took their whole stock and there being 12 of them we gave a shilling to one six and a shilling to another and left them to divide equally. Away they went crowding about the shilling holders and squabbling which set they should belong to and the monied boy uttered high tones in consequence of the important office he filled. We selected a few pieces from the ore they had brought in memory of the place. The specimens were and the ore sometimes is pure copper, at others mixed sulphuret of copper lead and iron and now and then specimens of blende or sulphuret of zinc are found. The sulphurets are frequently mixed with white quartz.

We now dressed. I stripped off everything but my stockings and boots and took possession of a miners trousers, shirt and coat all of thick flannel. Then putting on a thick woollen cap, hanging a candle to my breast button and taking another lighted and garnished with clay in my hand I was now ready to descend. Magrath was similarly equipped and we laughed heartily at each other as a sort of prologue to our adventure. We followed Captain Leaman to a small shaft and a little distance from the office and in such true miners style that I verily believe the men themselves did not know us for other than miners. The place we prepared to descend was a small aperture in the earth about 4 ft. by 3 ft. wide and a ladder appeared at its mouth which descended into the darkness below. Captain Leaman chose this shaft because it was the most comfortable. There were two others but the pump rods worked up and down in one and in the other we could only ascend and descend in the buckets like lumps of ore. Having taken a lesson how to hold our candles we got on to the ladder. It was not long but on reaching its termination we had to swing around it by a little stage on to a second and from that on to a third and so on until I lost count of their number. We soon left daylight and were not long before we were well used to the place and could trust so securely to our hands as scarcely to notice a false step though a fall would have led us down 200 or 300 ft. without any ceremony or hesitation. At last we began to enter the vein and had to shuffle on in a more irregular manner. A rope ladder occurred here and there in places where the chasm was too crooked to admit a straight one of

wood and they felt very curious dangling in the middle of the air and darkness.

I ought here dear Margaret endeavour to give you an idea of a metallic vein and then you will comprehend our progress better. Imagine then a large lump of clay with a sheet of Iron thrust obliquely through it and the clay will represent the earth (in our case the Parys Mountain) and the sheet the vein only you must modify this idea according to the following circumstances. The vein is not of uniform thickness throughout but differs very much indeed in different parts, sometimes it is not more than half an inch thick and other times it becomes 20 to 30 feet wide. The edges on the veins or sheet of ore are not so regular as the edges of the metal plate I have mentioned. The upper edge is of course at the earth surface only covered perhaps a foot or two by soil and the lower edge frequently descends to unworkable depths laterally. The vein spreads out through the country, but when traced to its termination is irregular and ragged. Veins have been traced above - feet and sometimes they extend for miles across the country. The Veins are very rarely perpendicular in the earth. The one we were in extended on the surface east and west and in descending in the earth it approached towards the north which is technically expressed by saying it dips from South to North. In working the vein the only object is to remove the ore from its place with safety and to this end every contrivance is adapted. Shafts are dry wells dug down to the workings by which man and materials and ore pass. Galleries and workings are excavations made in the mass of the rock below to give access to the ore. The waters deposited by the surrounding earth are removed by pumps and thus precautions and contrivances are adopted as occasion requires.

Well our progress in the vein was at first through very confined passages but on a sudden we entered a place like a large chamber so large that our light would not reach across it. Here the vein had swelled out into a bunch in the way I just now mentioned and had afforded a very rich mass of ore. Here again it became very narrow and we had in one corner to lay down on our backs and wriggle in through rough slanting opening not more than 12 or 14 inches wide. The whole mountain being above us and threatening to crush us to pieces. You will understand my Dear Girl we were now in those parts of the veins which had been cleared of ore by the workmen. All, however, above and below to the right and the left was not void for if the ore had simply been removed and the place left to itself working would soon have been stopped. You will remember we were now in the centre of the mountain and its whole weight resting over us and this weight would long ago have crushed the two sides of the empty veins together if precautions had not been taken to keep the place open and support the mountain. This is done thus. When the miners have excavated the vein so as to leave a free space above them of perhaps 20 feet in height timber as the trunks of trees are let down to them which they place across the cavity a little distance above their heads so as to form a rough, strong floor and then on this is placed all the gangue and useless rubbish loosened with the ore, until the place is half full of such parts of the vein been left open as are useful for the conveyance and the workings. In this way a number of what may be called apartments or galleries are formed in the empty part of the vein at the end of which men frequently go on working in a horizontal direction on the edge of the vein, whilst others far below them are extending it in depth.

Proceeding along one of these galleries we came at last to a chasm at the bottom of which we could just see men with lights. Whilst admiring the curious scene the large bucket came rushing past us from above and descended down into the depths. This indeed was the shaft at which we had seen horses and men raising ore above ground for the cobbers. It was intersected in this place by the gallery along which we were proceeding and stopped our progress. The shaft here was not perpendicular but followed the inclination of the vein and the bucket slid up and down against one side which was covered with smooth planks. In a few minutes we saw a bucket come up and to us strangers it had a very curious appearance. The rope moving on for a long time without visible means,

the empty bucket banging, slipping and tumbling down and the full one suddenly emerging from the darkness beneath into the candlelight and immediately disappearing above are so peculiar in their effect as to irresistibly create some degree of surprise.

We crossed this place on a plank and a rope loosely put over it and advancing onwards soon after descended again creeping and sliding, tumbling and slipping as before Captain Leaman giving us the utmost attention in explaining everything. Now at times we began to hear explosions which reverberated throughout the mine in grand style and we soon came up to two men who were preparing a blast. A hole is cut first by chisels in the rock in the direction thought most proper and from 12 to 24 inches deep according to circumstances. This being cleaned out by proper tools a portion of gunpowder is placed in the bottom of it and then a long thin iron rod called a needle being put down into the gunpowder, pounded stone is introduced and rammed hard with an iron tool on to the gunpowder. More stone is introduced until the hole is full and then the needle being withdrawn, a straw filled with powder or sometimes quills so filled are put down the hole and make a communication with the charge below. A bit of touch paper is then attached to the external gunpowder and being lighted the men retire a few yards off round some projection or corner whilst the explosion happens. When it has taken place the ore or stone thrown off is removed and the process again repeated. It is astonishing how careless the men become of the peculiar dangers to which they are liable from the frequency with which they meet them.. They go on hammering without the least care at the hole charged with powder and now then explode it by the attrition they cause before they are out of the way and then men get killed. They put their candles anyhow and anywhere and their powder is treated in the same manner. Magrath, to rest himself whilst the Captain gave directions, sat down on a tub and stuck his candle against its side. We found out afterwards it was what they kept the powder in and it certainly would not have been wonderful if we had all made a grand blast together.

Here the men were at work on the rock cutting a level to another part of the vein and they are paid so much per foot or yard, but returning a little way and then moving on again we soon came to some who were working out ore. They blast it just as in the former case and it is then carried to the edge of the shaft I before spoke of and drawn up by the buckets. These men also work piece work but differently to the others. Captain Leaman comes and views the place and then he submits terms to the men thus I will let you have that place a month at so much per ton of ore raised' varying the price per ton according to the supposed facility of obtaining and working the ore. After the bargain is made the men take all risks of the place being good or bad, sometimes when it appears very unpromising and they have obtained a high price for working it out in consequence of the greater expenditure of powder and labour supposed to he necessary it will expand into a bunch of ore. Then the men earn much money during their month or period of time for they raise an immense quantity of ore rapidly and without much trouble and now and then save a hundred pounds very quickly. On other occasions things are against them and when their time is expired they have raised so little ore as not to have earned sufficient to pay off their powder bill. Generally, however, things are so managed so as to leave them well though not extravagantly paid. None of these men work more than 8 hours a day in the mine. The rest of their time is spent above ground at home, there being sets of workmen who replace each other.

We had now reached the well of the mine situated at its lowest point nearby. Here all the waters that run from the earth into the excavation are collected together to be pumped up. There was a large quantity in a sort of tank boarded over and containing much copper in solution. The waters it appears had risen a little and they were very particular about them just now because close at hand they were deepening the mine and working at a level below that of the well. We were here in the busy part and

the black heads and faces that popped into sight every now and then with a candle before them looked very droll. Some miners were stuck up in a corner over our heads making a roof and they seemed to cling to the rock like bats so that I wondered how they got and remained there but in a few moments I found we had to go up there too and indeed we managed very well. Difficulties and dangers are in almost every case magnified by distance and diminished by approximation, and I do not think that one place in the world can be better suited to illustrate this than a mine.

Following the example of our Captain and peeping into a small chasm through which a man might by contrivance pass, we found it to be the entrance into a large cavity from 30 to 40 feet wide every way. This had been a fine bunch of ore and there were 6 or 7 men with their candles working in it. We did not go down but putting our lights aside laid our heads to the aperture and viewed this admirable Cimmerian scene for some time with great pleasure, the continual explosion on all sides increasing the effect. This was the lowest part of those workings and was about 370 feet below the surface of the earth.

After a little further progress we came to the pump shaft, an aperture cut down from the surface to this spot. It was 360 ft. deep and we could see no daylight up it. Below it was a small well connected with the large one before mentioned and into this were inserted pumps. The first was a lifting pump and raised the water a few feet. Then a forcing pump took it and made it ascend up pipes far away out of sight. The pumps were worked by the steam engine we had seen above being connected with it by beams of wood descending in the shaft and continually rattling up and down in it. In the small part of the shaft left vacant by the pistons pipes and beams were fixed ladders which ascending from stage to stage conducting to the top and up. There we had to go bathed in the shower of water which was shaken off from all parts of the pump works. After long climbing we came to a part of the shaft where the first forcing pump delivered its water into a little cistern and then another pump of the same construction threw it up to the surface. Still proceeding we at last got a glimpse of daylight above and were soon able to see the pump rods by it. Now the danger of the ascent appeared far greater than before for the more extensive light showing in the well above and something of the depth below made us conscious of our real situation whereas before we only thought of the small spot illuminated by our candles. The agitation of the pump rods was more visible too and appeared greater from being seen over a larger space and their rattling and thumping was quite in accordance with appearances. But in spite of all things we gained the surface in high glee and came up into the world above at the engine after a residence of about two hours in the queer place below.

We were again amused with each others appearance which though comical before was now much heightened by the dirt and water of the mine. At the office we found Mr. Irewick waiting for us and soap and hot water ready for use. We stripped, washed and dressed and were soon in complete order again.

All the miners work in flannel clothes and from our own feelings we had reason to commend the custom. We did not feel at all incommoded by heat during our stay below though when we came up and began to change we found ourselves in the very highest state of perspiration. The advantage of flannel arises from the little influence moisture has over it and its non-adhesion to the skin even though damp or moist.

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MICHAEL FARADAY - TOUR IN WALES - 1819

THURSDAY JULY 29th

. . . . continued from underground trip

Mr. Irewick now took charge of us and showed us the work above ground. We went first to the kilns and in our way passed other mine workings belonging to the Mona Company. At the kilns the following process is carried into effect. The ore is raised from the mine and broken by the women as described, is placed in heaps about 35 feet long, 10 wide and 10 high. Larger pieces of ore are used for the outside which is something like rough brickwork but the ore is wheeled in anyhow into the interior. Four or five large holes are made in the mass below like ash pits and when the heap contains enough ore flues are built across and along the top, the large pieces of ore which are connected with another flue running two or three feet from the kiln on the ground and this being done the whole heap is covered with earth and clay so as to prevent the entrance and exit air or vapour except by the holes before-mentioned and the flues. A brick chamber is built a few feet from the kiln and connected with its flue at one end, the other having a small aperture. Some lighted coals are now thrown into the holes left at the bottom of the kilns and in the course of a day they heat and inflame the ore immediately about them and afterwards no further additional fuel is necessary but the combustion goes on with the ore itself one part roasting the other. This lasts five or six weeks and all the sulphur separated and sulphurous acid generated pass through the flues into the chamber and are there condensed. In this way very little vapour escapes and the process instead of being a general nuisance as at Swansea is a very magnificent and agreeable example of sublimation.

When the kiln goes out of itself and is cooled it is pulled down and the ore taken away in carts to the refineries near the port. Those parts which happen here and there to be only half burned being carefully selected and put into other kilns. The chamber is not disturbed for the first, second, even third kiln but after the sulphur of many kilns has been sublimed into it it is opened the brimstone taken out, washed from the acid which adheres to it and is fused and then it goes to market.

From hence we went to the precipitating pits. I have already said that the water which gathers in some of the workings is a very strong solution of sulphate of copper from its action on the sulphuret. This water is pumped up by a steam engine into large reservoirs and it is let down by sluices from there into small tanks placed side by side each about I2 feet long, 8 wide and 18 inches deep. Into these tanks is thrown old iron of all sorts, hoops, nails, saucepans, etc., and they frequently procure what they call iron from the

iron works, but it is generally a mixture of slag and iron containing about half its weight of the latter. In this state the iron and water remain in contact for some time being turned now and then to expose fresh surfaces to their mutual action and then the water is drawn off and fresh let in. The waters are not thrown away after having been once over the iron but that which has been acted on in the highest tank is let down into a second where there is more iron and then again into a third, fourth and fifth in all of which there is iron until it is so poor as not to be worth working any longer. The result of this arrangement is the production of copper in these tanks occasioned by the play of affinities which takes place between the substances. The water contains sulphate of copper or blue vitriol to which iron is added and iron having a stronger attraction for oxygen and sulphuric acid than copper has, it takes both these substances from the blue vitriol uniting to them and forming a soluble salt and consequently the copper is thrown out and remains as a sediment in the tank. This sediment is never pure copper but always a mixture with the rust or oxide of iron a part of which comes from the dirty state of the iron when thrown in, and another part from the spontaneous decomposition of the salt of iron which is produced, for you must understand My Dear Girl that the combination first made by the Iron and Sulphuric acid is what is commonly called green vitriol or copperas. Now when the salt is dissolved and exposed to air it absorbs a portion of the oxygen of the air and the Iron becomes more oxidised. In this state as it is not so soluble in the acid as before and therefore a part is deposited as a red powder mixed with the copper rendering it impure, consequently the sediment is always copper mixed with oxide of iron and it is richer in copper from the first tank or the strong water and poorer when obtained from the last tank. It is found from experience that if the sediment yield less than 5 per cent of copper the expense of the iron is more than the worth of the copper obtained so that waters reduced until they yield the mixture of only 5 per cent copper are thrown away. In the first tanks the sediments are so rich in copper as to yield 80 or 90 per cent. These tanks are emptied of their sediments once a quarter. When the substance is dry it is taken down to the refineries and soon rendered fit for market. From 40 to 50 tons of copper are produced annually in this way.

When the water first runs from the tank it is of a fine red colour from the per-sulphate of iron it contains. The pools which receive it and the rivers it forms in passing to the harbour, look as if filled with blood. In the harbour it soon becomes diluted by the sea but the rocks to a great distance are stained by it.

We then walked on to the Parys mine. This is an immense excavation open to today on the other side of the same mountain. An extraordinary accumulation of ore was found in this place which, when worked, proved of immense value and brought in enormous incomes to the proprietor. It appears that 3 or 4 veins of copper here converge together and caused a single disposition of ore which has made the place so deservedly famous. At present the ore is not so abundant and the mine is worked by underground shafts and galleries like the others though still a little is done above.

In our way from hence to the assay we passed several groups of children who were

engaged in searching the rubbish of ancient workings. Formerly the ore was not so perfectly produced as at present and much was thrown away with the slag. Now these heaps of refuse are eagerly sought for the better parts selected and sent to the refineries to be reduced.

At the Assay office we found the Assay master and his assistant busy in ascertaining the relative value of different specimens of ore slag metal etc., and according to his report are workmen paid and the calculation made, I saw nothing very particular there.

Now having viewed everything and spent 4 hours very pleasantly among the works we returned to the mine office pocketed our minerals, shouldered our bundles, bade adieu to our very kind friends Messrs. Irewick and Leaman and again set off on our journeyings. We endeavoured to find a nearer way from the Mine to Bangor Ferry than we had taken from the ferry to Amlwch and succeeded to a certain extent but the sea was rising over the sands in the bay of the coast and two or three times turned us a little aside. Our walk was much finer than yesterday and contained more coast scenery in it. We frequently had bays on our left. with the waves rolling into them and shipping in the distance and the day was neither so hot nor so misty.

The rock on the Parys mountains is slate. A few miles from its eastward end we came on to sandstone and breccia of white quartz pebbles and then on to a limestone full of organic remains energyne and alcyine and shells.

FOLKLORE OF PARYS MOUNTAIN

Tradition has it that the great copper ore lode was discovered at the Mona mine on 2nd march 1768 by a miner called Rolant Puw. As a reward for his discovery he was given a bottle of Whisky and was allowed to live in his cottage rent free for the rest of his life. For many years afterwards a great ox roast was held on the mountain in the area know as the oxen quarry.

Cathy Randall was a working woman of ill repute. She had a small hovel on the eastern side of Parys Mountain close to the Mona mine open cast. It was said that she could drink, fight and swear as good as any of the miners working at the mine. The path leading to her cottage was known as *Llwybr Cathy Randell* and was trodden by many a lowly miner following payday. She was responsible for educating many youths into the delights of manhood!

This all changed when Cathy went to a meeting held by the great Methodist preacher called John Ellias. She was taken under the minister's wing and converted to the faith. Today the cottage that she once used is buried under tonnes of rubble but the path is still called Cathy Randell's path.

One group of woman workers have long remained in Amlwch memory. These were the copper ladies of Parys Mountain. These ladies wore a steel ringed glove on their left hand and used a heavy hammer in their right. With a woollen shawl around their shoulders they would work at a small iron anvil for 8 hours a day. Their job was to break up the ore that had been mined from the mountain into small pieces prior to smelting.

When the Parys mines finally stopped producing in the 19th century, many of the miners and the copper ladies moved to Drws y Coed copper mine in Snowdonia. Even here the copper ladies had a reputation of being very hard and the general advice to local men was to avoid having to marry a copper lady from Amlwch.



"Copper Ladies" at work

Surface buildings on Parys mountain



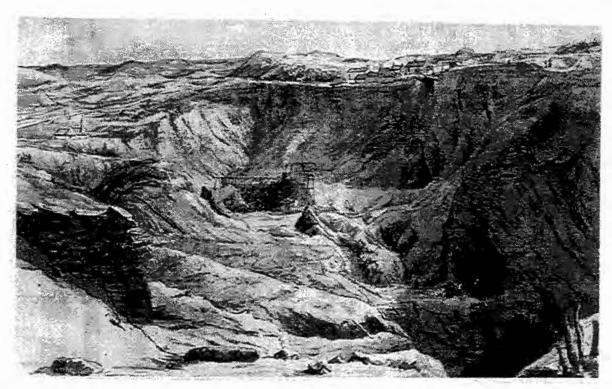
The windmill on the top of the mountain as it is seen today.



It had five sails and was coupled to steam driven equipment in the mine. The wind helped to reduce the amount of steam that had to be raised.



The pearl engine house. Machinery in these building was used to pump water from the fresh water lake beyond to the steam raising equipment at the top of the mountain.



A painting made around 1854 by Warrington Smythe, an Inspector of Mines. It is of the Great Open Cast pit of the Parys Mine as viewed from the N.E.



Arial photograph taken 13 May 1995 showing the shaft and mill sites, the west end of the old workings with the hills of Snowdonia beyond Anglesey and the Menai Straits to the South.

Extracts from a 1991 Leaflet

These extracts are taken from a leaflet on Parys Mountain prepared in 1991 by Anglesey Mining plc. They provide bits of additional information on the Mountain itself and on the company at that time.

History

The history of Parys Mountain mining activity is obscure prior to 1750, although there is evidence of mining as far back as Roman times. There is also evidence of Celtic mining and attempts to precipitate copper from mine waters by the Elizabethans in 1579.

A period of exploration occurred between 1750 and 1768 when Thomas Rose lead a team which discovered the Great Golden Venture Lode in the Flarys Mine area. Within 5 years there were an estimated 1,500 men employed there hand working the open pit excavations which can be seen today. Smelters were first constructed in 1778 to upgrade poorer ore, consuming some 30,000 tons of coal annually. High grade ore was shipped directly to other smelters. Open pit mining finished during the early 1800's and was replaced by small-scale underground mining at the Mona Mine in 181 1. A major expansion of underground mining in 1830 resulted from the discovery of the North Discovery Lode.

As the workings deepened, pumping became essential and a fine Comish enginehouse and windmill tower are legacies of the period, as are extensive copper and ochre pits dating from the 18th century. Old scrap iron was placed in the pits where it dissolved with the copper in the water remaining behind as a heavy sludge.

During the late eighteenth century the mines on Parys Mountain constituted the largest copper production area in the world, but by 1904 the mines had closed due to lower cost production elsewhere in the world. The total production of copper from the area during the period between 1768 and 1904 has been estimated at 3.5 million tons of ore, from which 130,000 tons of copper metal was recovered.

It is estimated that there are over 20 km of abandoned underground tunnels and 84 named shafts plus 20 other workings, over a vertical extent of some 300 meters.

Geology

The property lies within the Caledonian Tectonic Belt which consists locally of a folded sequence of Ordovician and Silurian volcanic and sedimentary rocks, approximately 480 million years old. These rocks were affected by a subsequent period of mountain building and the resultant geological structure at Parys Mountain is dominated by an east-west trending syncline.

Exploration using modern methods commenced in 1955 and was continued by a number of mining companies intermittently for 30 years. Most of the drilling prior to 1973 was directed towards the exploration for copper and the size and significance of the polymetallic copper-lead- zinc-silver-gold deposits was first recognised in 1978 with the discovery of a high-grade zone, later to be named the Engine zone, located at the western end of the Property.

This mineralisation is mainly of volcanic origin and occurs at or above the contact between the sedimentary and volcanic rocks. Exploration has identified several zones of mineralisation

consisting of beds of massive sulphides containing varying proportions of zinc, lead and copper sulphides, as sphalerite, galena, chalcopyrite and pyrite, with silver and gold.

Some 145 drill holes have been completed on the property, amounting to 47,360 m of drilling and a potentially mineable reserve has been estimated at 4.8 m tonnes with an average grade of: 1.49% Copper, 3.03% Lead, 6.04% Zinc, 57g Silver/ton and 0.4g Gold/ton. This reserve is the target of the current (1991) shaft sinking operation.

Mine Development

Anglesey Mining pic has initiated a programme to develop Parys Mountain to a point of commercial production in two phases.

Phase I involved the drilling and blasting of a 500 metre vertical shaft and driving tunnels totalling 1000 m in length to intersect the mineralised zones at selected levels, so that the bulk samples can be collected for detailed metallurgical testwork. This lateral development included access to underground drilling stations and also the orebodies themselves. Detailed drilling and underground sampling enabled reserves estimated from surface drilling to be confirmed and provide the basis for mine and plant design. The current shaft development and planned lateral development have been designed, sized and located so that they fit in with the overall mine design and will become part of the future production facility.

Phase 11 will consist of the construction of a surface ore processing facility and further development of the underground mine and plant. It is estimated that this Phase will require

further funding of some E25 million and will take eighteen months to complete. Thereafter Anglesey mining will be in commercial production.

Access to Parys Mountain is excellent by rail, road and sea. All necessary services and resources, including power supply, repair and maintenance facilities are located within a relatively short distance.

Mining, Processing and Selling

Access to the ore body will be by a series of tunnels from the shaft at appropriate levels. Conventional shrinkage or blasthole stoping methods will be applied to extract the ore, providing the opportunity for low cost, high tonnage production.

The ore will be transported to an underground crusher station and then brought to the surface where it will be fed into the grinding mills of a concentrator plant constructed on the old mine site. The valuable minerals will be recovered from the pulp by a froth flotation process, yielding concentrates of copper, lead and zinc materials. The barren rock left after the separation process will be placed in tailings dams constructed on the old ochre pits to the south of the mountain. The concentrates will also contain silver and gold which are normally sold to smelters as an integral part of the base metal concentrates.

Employment

Shaft sinking operations have created 45 jobs in the immediate area and Phase 11 construction work will create a further 50 to 100 vacancies. At full production the mine will employ between 150 and 200 people.

Shaft sinking and development work has been contracted to Cementation Mining Ltd, with the day-today management being undertaken by the Mining Director and staff based at Amlwch. Further management

services and support are provided by Anglesey Mining's parent company, Imperial Metals Corporation. Technical services are provided by the Robertson group and other consultants.

Conservation

Anglesey Mining has planned its development programme giving careful attention to environmental, historical and archaeological concerns. An ongoing environmental monitoring programme has already commenced.

The Company has in conjunction with Gwynedd County Council and Ynys Mon Borough council recently waymarked all public footpaths on the mountain with coloured stakes. Further public access to archaeological and historical areas of interest on Parys Mountain is planned through the establishment of a series of additional discretionary footpaths and viewing platforms overlooking the Opencast working and other sites of interest.

The Renaissance of Parys Mountain

After 4 years of exploration and drilling, and successful public launch in May 1988, Anglesey Mining plc, a subsidiary of Imperial Metals Corporation of Vancouver, has now commenced an extensive mine development programme at Parys Mountain.

The first stone of the shaft sinking operation was turned on the 11th of October 1988 and the sinking hoist was commissioned in December of that year.

By the end of 1990 on the completion of Phase I the shaft had been sunk to a depth of 300 metres and over 100 m of underground development tunnels had been completed.

From these tunnels diamond drill holes further delineated the ore zones and bulk samples were taken for processing plant evaluation and design.

In Phase 11 the shaft will be deepened to over 400 m before driving further tunnels for mineral extraction. During this phase mill construction will commence on the old mine site and an onsite disposal facility will be built on the south side of the mountain.

On successful completion of the four year two stage development programme the Parys Mountain operation will be the most significant base metal producer in the UK, with a considerable economic impact on employment and business in the Anglesey area.

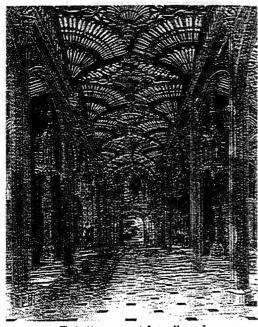
The Carleton House Token By Jim Wahl

Carleton House is depicted on a token, Middlesex 49, one of Kempson's Scries of London Tokens. It was used as the residence of King George III's mother until her death in 1772, and then remained unoccupied until the King presented it to George, the Prince of Wales, in 1783 when he became 21 years of age.

The Prince of Wales insisted at the time that he needed to have an allowance of £100,000 to meet his life style, but was granted £50,000, and he had additional outside income from Cornwall of £15,000. When the King presented him with the Mansion House he thought that some modest repair, painting and furniture would be sufficient to make it a suitable residence. The Prince, however, as a leader in fashion, felt that he needed a luxurious palace. A new book, "George IV", by E.A. Smith, has some data on the cost of some of the renovations and additions made to the facilities. The Prince calculated that whatever was spent, the King would have to make good on the debts incurred.

All the figures here are in pounds, and the author uses a factor of 50 to translate into today's equivalents in pounds. A further factor of 1.6 would translate to a factor of 80 in American dollars. The architect's estimate for the first stage of work was $\pm 30,250$ for rebuilding the east wing to match a new west wing. Added were a bathrooom, dressing room and staircase in the basement, an oval dressing room, powdering room, closet and toilet. A new hall was to be built with a ballroom, grand staircase, servants rooms, kitchen and offices. A new front replaced the existing front of the building. Additional money was needed for purchasing and demolishing some adjacent houses. Furnishing the hall was $\pm 6,500$ more, $\pm 1,500$ for another lodge and $\pm 9,000$ for a barn or structure to stable 72 horses, with room for 20 carriages, plus rooms for the stable staff. The interior designer sent a bill for $\pm 38,021$ for work done for three years to 1786. The architect estimated that a further $\pm 69,700$ would be needed to work on an extended plan.

Interior furnishings were to cost £35,000. When all the rich furnishings for the newly constructed additions were installed furnishings from earlier years were replaced at a further cost of £110,500. By 1786 there were unpaid amounts of £52,637 for building and furnishings, £32,399 for the stables and provision for finishing Carlton House of £79,700, as part of his overall debt of £269,000, equivalent of about \$21,500,000. The picture of the gothic conservatory which was new construction gives a good idea of the lavishness expended on Carlton House in this period. Parliament voted £221,000 in 1787 to clear the debts. The Prince, and later as King George IV, used it as his residence until it was demolished in 1826.



15. The 'gothic conservatory', Cariton House, 1819.



49. O: CARLETON HOUSE, E.c:
AS IN 1788. A. 40

England's Eccentric Queen Caroline

By R. C. Bell Newcastle Upon Tyne, England

Caroline Amelia Elizabeth, the second daughter of the Duke of Brunswick, met her husband for the first time in a most unusual manner! Arriving in England April 5, 1795 to marry the Prince of Wales, heir apparent to the throne of England, she first encountered him at the marriage negotiator's.

At their first meeting she knelt before the prince, who raised her to her feet, embraced her, then turned to the marriage negotiator, Malmesbury, and remarked, "Harris, I am not well. Pray get me a glass of brandy." Thereupon the prince turned on his heels and walked away.

That evening Caroline dined with the prince and his then-current mistress, Lady Jersey. Three days later, on April 8, George and Caroline were married. The prince was drunk during the wedding and remained so for the rest of that day.

Their daughter, Princess Charlotte, was born January 7, 1796, and four months later the ill-assorted marriage partners separated. The prince was a dandy and meticulous about his personal appearance, while Caroline was slovenly, and disinclined even to wash.

She took a villa at Charlton, near Blackheath, and began to adopt a series of children, soon collecting nine. Later she adopted a little boy, William Austin, on whom she lavished her frustrated mother love which was intensified by her hatred of her husband. Soon she declared "Willikins" to be her own, and the prince and his friends pressed for a Royal Commission to enquire into the princess' behavior.

The "delicate investigation" cleared Caroline of bearing an illegitimate child, but found her guilty of indiscretions. Caroline's crytic comment on these findings was that she had only committed adultery once, and that was with Mrs. Fitzherbert's husband...a devastating allusion to the Prince of



Caroline, Princess of Wales. (D&H Middlesex 980)



George, Prince of Wales. (D&H Middlesex 965)

Wales' secret (and denied) marriage with this lady.

After her clearance Caroline was received again at court by the king, who was fond of his daughter-in-law and hated his son.

On August 16, 1814, Caroline left England in the frigate Jason, taking "Willikins" with her, and a suite of two ladies-in-waiting, five gentlemen, a steward, six German servants and an English coachman. Before departing she bought an old London and Dover mail-coach for her servants and baggage, and this vehicle caused a sensation at every continental town she visited.

The sensation was shared by the vehicle with a long tin case on which was painted in large white letters: HER ROYAL HIGHNESS THE PRINCESS OF WALES, TO BE ALWAYS WITH HER. Ostensibly she was traveling incognito!

Token Tales



The Freemasons' coat of arms. The Prince of Wales was elected grand master on November 24, 1790. (D&H Middlesex 367)

In 1816 the entourage visited Jerusalem, where she founded a New Order of Saint Caroline, dedicated to Santa Carolina. The grand mastership was made hereditary in the Bergami family, while its red cross with a lilac ribbon and motto HONI SOIT QUI MAL Y PENSE was confered upon Willikins.

The use of the Prince of Wales' own motto, and the parody of his Grand Mastership of the Masonic Lodges was not lost upon his contemporaries, and the Regent became the laughing-stock of Europe. During this visit to the Holy Land, Caroline entered Jerusalem riding on an ass, and on her return to Italy had a painting made of the episode, which was regarded by many as blasphemy.

In the spring of 1817 she visited Baden and insisted on wearing Turkish costume, and half a pumpkin on her head to keep it cool.

On the accession of her husband as George IV in January, 1820, orders were given to all English ambassadors to prevent the recognition of the princess as queen of England in any foreign court, and her name was omitted from the prayers for the royal family in the prayer-book. These measures revived sympathy for the princess, and she decided to return to England.

The new king and his government tried to bribe her to remain abroad by an offer of a revenue of £50,000, but she brushed it aside and arrived

at Dover in an ordinary packet-ship. As she landed the guns of the castle gave her a royal salute. Her entry into London was a triumphant procession, vast crowds cheering her battered old coach.

George IV retired to Windsor and urged his government to undertake the trial of Caroline of Brunswick in the House of Lords where they were sure of a majority.

On August 17, 1820, the prime minister brought in "An act to deprive Her Majesty Queen Caroline Amelia Elizabeth of the title, prerogatives, rights, and privileges of Queen Consort of this realm and to dissolve the marriage between His Majesty and the said Caroline Amelia Elizabeth."

As a bill it required three readings, and at first it was passed by a large majority. The main charge against the queen was of having slept under an awning with Bergami on the deck of a polacca, a small trading vessel. About this time Byron wrote from Italy... "No one here has the slightest doubt about the Q. and Bergami. It was as public as such a thing can be."

Few in England believed in the queen's innocence, but the populace was on the side of a wronged woman, and also enjoyed the embarrassment of an unpopular sovereign. Bergami became a favorite with the crowds as the star performer in the queen's revenge on the king.

There is a story that Lord Anglesea was once forced by the mob to shout "God save the Queen!" He added the telling words, "And may your wives be like her!"

Caroline was brilliantly defended by Erskine, and at the second reading the majority had dropped to twenty-eight. Four days later at the third reading it was nine, and there was every likelihood of an acquittal by the House of Commons.

The bill was hurriedly withdrawn and the country's reaction was quite unexpected. In all the big towns there were scenes of wild rejoicing lasting three days, and ships in harbor were covered with bunting. When Caroline went to St. Paul's to offer thanksgiving

Token Tales



A stage coach.

For the next six years Caroline and her entourage clowned across Europe like a traveling circus, to the mortification of her husband, now the Prince Regent. She visited her brother in Brunswick and there plunged into a hectic round of theaters, suppers, dances and masquerades, often rousing musicians and guests in the early hours of the morning to hold a ball.

Her cortege visited in turn, Frankfurt, Strassburg, Bern and Geneva. At Geneva she was entertained by the ex-Empress Marie Louise of France. Caroline shocked European society by appearing at a masked ball as Venus, naked from the waist upwards, in which state she sang a duet with the former first lady of France.

Most of the English members of her party left when she reached Italy, tired and disgusted with the endless quest for pleasure. They were replaced by Italians, and a handsome ex-soldier, Bartolomeo Bergami became her personal attendant.

In Naples at a ball held in honor of King Joachim Murat, she arrived wearing a diaphanous garment as the "Genius of History;" while she appeared in the streets of Genoa wearing a pink bodice cut almost to the waist, a skirt revealing her plump knees, and crowned by a ludicrous hat with swaying feathers. She was driven in a shell-like carriage drawn by little circus ponies, preceded by Bergami, also on a pony, dressed exactly like Murat, the king of Naples. Beside her in the carriage was Willikins.



This 1795 halfpenny token declares itself a BRUNSWICK HALFPENNY.

for her deliverance (for in English law a queen's adultery was treason and carried the death penalty) there was a huge and noisy demonstration.

The sovereign was left in no doubt that he was despised throughout the land. He retaliated by barring the queen from the coronation ceremony at Westminster Abbey on July 19, 1821.

Eleven days later she attended Drury Lane theater to see Kean's "Richard III." During the performance she drank a glass of lemonade and shortly afterwards was in great pain, and declared that she had been poisoned. A week later she was dead.

Her property was left to William Austin, and she requested that she should be buried in Brunswick, and that her coffin should be inscribed: "Here lies Caroline, the murdered queen of England."

A plate was placed on the coffin with "injured" replacing "murdered," but it was later removed.

The king tried to prevent her funeral procession passing through London on its way to Harwich, but crowds barred its intended route and in spite of the soldiery, the coffin was carried through the heart of the city. During the frequent altercations, troops fired on the crowds, and two people were killed and many others were injured.

Shops were closed, windows were draped in black, and the citizens of London in mourning lined the streets in the pouring rain.

On August 24 this stormy petrel was buried in the family vault in Brunswick by the side of her father, killed in the Napoleonic Wars.

Next: The Coal Trade.

Swan Upping

Annual 'Swan Marking' on the Thames by the Vintners' Compan)
The Dyers' Company and The Monarch's Swan Marker

History

Swan Upping dates from medieval times, when the Crown claimed ownership of all mute swans at a time when swans were considered an important food source for banquets and feasts. Today, the Crown retains the right to ownership of all unmarked Mute swans in open water, but The Queen only exercises her ownership on certain stretches of the River Thames and its surrounding tributaries. This ownership is shared with the Vintners' and Dyers' Companies, who were both granted rights of ownership by the Crown in the fifteenth century. (The swans are counted, but no longer eaten.)

The Queen's Swan Marker and Swan Uppers, accompanied by the Swan Uppers of the Vinters' and Dyers' livery companies use six traditional Thames rowing skiffs in their five day journey upstream as far as Abingdon. By tradition, scarlet uniforms are worn by The Queen's Swan Marker and Swan Uppers, and each boat flies their appropriate flags and pennants.

The event takes place in the third week of July.

The Queen's Swan Marker produces a report at the completion of Swan Upping each year, which provides data on the number of swans accounted for, including broods and cygnets. The cygnets are weighed and measured to obtain estimates of growth rates, and the birds are examined for any sign of injury (commonly caused by fishing hooks and line). The cygnets are ringed with individual identification numbers by The Queen's Swan Warden, whose role is scientific and non-ceremonial.

Apart from Swan Upping, The Queen's Swan Marker has other duties: he advises local organisations throughout the country on swan welfare and incidents involving swans, he monitors the health of local swan populations, and he briefs fishing and boating organisations on how to work with existing wildlife and maintain existing natural habitat. He works closely with swan rescue organisations and carries out the rescue of sick and injured swans when relevant, and coordinates the removal of swans from stretches of the river Thames used for summer rowing regattas.





The following was issued by the Royal Web site: http://www.royal.gov.uk
25th May, 1999

The dates for this year's Swan Upping, the annual census of the swan population on certain stretches of the River Thames, were announced today by David Barber, The Queen's Swan Marker. Swan Upping will begin on Monday 19th July from Sunbury-on-Thames and continue upstream to Abingdon in Oxfordshire on Friday 23rd July.

Swan Upping dates from the twelfth century and takes place during the third week of July each year. It has always been the duty of the Sovereign's Swan Marker to count the young cygnets each year and to ensure that the swan population is maintained. With the assistance of the Swan Warden, Professor Christopher Perrins of the University of Oxford, swans are also given a health check.

Announcing the dates for Swan Upping, David Barber said:

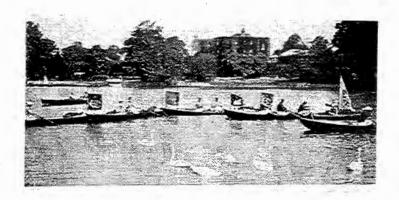
"Conservation continues to have a vital role within the ceremony of Swan Upping. It provides important data which reflects enormous changes in the river's environment over the past years. The use of non-toxic fishing weights has removed one danger to the swan population, but swans face increasing hazards from the increasing recreational use of the river by anglers and boat users. These users need to be aware of the dangers which they can create for the indigenous wildlife including swans. Vandalism and the theft of cygnets also create threats to the swan population.

"Recent figures show that the overall swan population is constant. However, this can only be maintained by the dedication of the public and swan rescue organisations, together with the work of the Environment Agency. It is important that everybody understands why the natural habitat of the River Thames must be preserved. This year, Swan Upping will have a strong educational theme, as children from three local schools will board a boat on Wednesday 21st July to accompany the Swan Uppers as they carry out their swan census and health checks. I hope that this will help to increase public awareness of conservation issues involving swans".

The following observation points and times were published for the event in 1999 (all times given are approximate). As the event always takes place during the third week of July, the locations below should apply for subsequent years. However, we recommend that you check if you are making a specific journey to view the proceedings.

Swan Upping on the Thames at Windsor in the 1920's

The swans are 'rounded up' ...

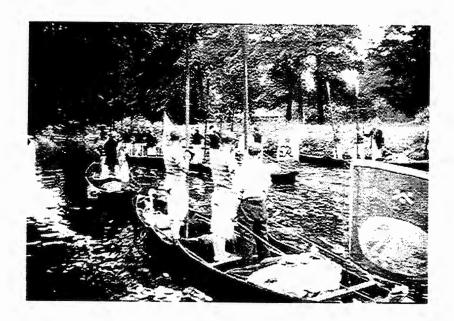


... so that the swans can be caught



... ready for ringing.





The flotilla of Swan Uppers boats in Romney Lock Cut in the late 1940's. Note the flag featuring GR Indicating that George VI was king at the time. This photograph records a ceremony associated with Swan Upping for many years, where the Vintners and Dyers Companies stand to drink a toast to the Monarch after passing through Romney Lock, the nearest lock to Windsor Castle.

The Anderson Sale--"Over the Top"

Bidding instructions warned token enthusiasts that the estimates were conservative in the Wayne Anderson sale of 18th century tokens conducted by Davissons Limited this spring. The estimates were about the only thing that was "conservative" in this explosive sale conducted by mail, telephone, fax and email that closed the 25th of April.

Total estimates in the sale were just over \$130,000 on 378 tokens plus a library of token references formed by Wayne Anderson, cofounder of the Conder Token Collectors Club. Realizing the near impossibility of collecting the entire Dalton and Hamer series in top condition, he sought to own the finest known examples of each piece he held, priding himself on having "Condition Census 1" examples of many of the types in his collection.

A strongly committed collector, he devoted substantial time and great energy to both collecting the pieces and doing the research necessary to determine just how high each piece ranked in terms of the finest pieces known and available.

It all paid off when his collection was sold: prices realized went over \$170,000. If each piece had sold for the maximum possible bid, the total realized in the sale would have been nearly \$211,000. Since maximum bids were reduced to the next advance beyond the second high bid, over \$40,000 in bids were unexercised even though they were authorized.

This was a remarkable achievement for a relatively small collection of tokens that was formed in just ten years. It may be taken as an indication that new price levels have been established for the "Conder token" series, a valid conclusion for pieces of exceptional quality.

But the few pieces in the sale that had minor problems, or were the least bit short of fully uncirculated and choice, sold at or even below estimate.

The message of the sale is clear and mirrors the U.S. market generally: top quality brings over-the-top prices. Otherwise, the market is reasonably strong and stable but prices are definitely more "down-to-earth."

A quick run through the sale demonstrates this: tokens like lot 516, Cheshire 57, sold for the \$100 estimate even though it was predominately red with some brown; minor carbon spots kept it from achieving more. Lot 536, a token of Essex (D&H 36) did not even realize the \$100 estimate even though it was a red and brown uncirculated example with no problems. The reason, simply, is that the strike was less strong than on the very best examples of this piece.

Kent 1, on the other hand, a penny struck to halfpenny size, sold for \$5310 with a disappointed underbidder at \$5000. This beautiful piece, rated "RR" by Dalton and Hamer, had an important pedigree as an ex Jan piece. It was estimated at \$1750 in the sale reflecting the price paid by Anderson.

The Skidmore mules, rated by Dalton and Hamer as "extremely rare," were uneven, again reflecting a sophisticated collector base. The rare star halfpenny (Msex 482a) estimated at \$1200 sold for \$1650, while 513, another "excessively rare" piece with "slight cabinet friction" that shows the King and Queen of France on the obverse and a guillotine on the reverse, was one of only five pieces in the entire sale to go unsold.

The cover coin, Warwickshire 42, a triple rarity piece showing boys playing marbles on the floor of a large school, limited to a striking of six examples only, sold for \$6100 on an estimate of \$6000. Though it was an even appearing piece with traces of luster, there was a slight rub on the tip of the nose of Philemon Holland, the issuer of the piece shown on the obverse. Presale expectations were that the piece could go over \$10,000 but the strong over-estimate bids were held for other pieces.

The Cumberland Lake token farthing estimated at \$250 went for \$660; an example of Durham 11 (S) on a generous flan went for \$525 on a \$250 estimate while a more rare near twin, Durham 10 (R), on a regularly sized flan went for only \$200 on an estimate of \$250. An example of Kent 2, the remarkable Orpington piece showing horses being put down, sold for \$2750 on an estimate of \$1000.

A spectacular Kempson Building Token of London, Middlesex 93 (RR), from a shattered die in brilliant uncirculated condition sold for \$2250 against an estimate of \$250.

Rare token references did well in the sale. The highlight was the rare Thomas Sharp/George Chetwynd catalog with the penned acknowledgement of Matthew Boulton on the fly leaf. Estimated at a conservative \$1500, the book left the United States on a bid of \$2350 leaving a disappointed North American underbidder at \$2310.

Setting new standards for prices in this remarkable series of tokens was perhaps the most obvious outcome of the sale of this remarkable collection. More important, however, is the extent to which this token sale places this oft-perceived numismatic "byway" in the mainstream of important and worthwhile collecting.

Copies of the catalog, as long as a limited stock remains, with prices realized are available at \$10 from Davissons Ltd of Cold Spring, MN 56320.

Allan Davisson June 2000

Auction Thirteen April 25, May 2, 2000 Prices Realized

Cold Spring, MN 56320 • 320-685-3835 • FAX 320 685-8636

| Prices Realized | | | | | | Cold Spring, MN 56320 • 320-685-3835 • FAX 320 685-8636 | | | | | | | |
|-----------------|----------------------|------------|------------|------------|------------|---|------------|------------|------------|------------|------------|------------|------------------|
| Lot | Price | 565 | 135 | 628 | 375 | 694 | 350 | 758 | <i>7</i> 5 | 822 | 225 | 888 | 50 |
| ٠. | | 566 | 210 | 629 | 330 | 695 | 260 | 759 | 100 | 823 | 210 | 889 | 60 |
| 501 | 400 | 567 | 125 | 630 | 160 | 696 | 161 | 760 | 75 | 824 | 175 | 890 | 135 |
| 502 | 200 | 568 | 110 | 631 | 82 | 697 | 350 | 761 | 275 | 825 | 235 | 891 | <i>7</i> 5 |
| 503 | 200 | 569 | 200 | 632 | 236 | 698 | 530 | 762 | 210 | 826 | 205 | 892 | 41 |
| 504 | 310 | 570 | 145 | 633 | 550 | 699 | 950 | 763 | 650 | 827 | 300 | 893 | 275 |
| 505 | 780 | 571 | 300 | | 200 | 700 | 510 | 764 | 1165 | 828 | 310 | 894 | 600 |
| | 80 | | | 634 | 330 | 1 | 100 | 765 | 900 | 829 | 350 | 895 | 105 |
| 506 | | 572 573 | 1750 | 635 | | 701 702 | 1550 | | 1050 | | 300 | | |
| 507 | 1000 | 573 | 700 | 636 | 165 | 702 703 | 65 | 766 767 | 75 | 830 | 450 | 896 | 140 150 |
| 508 | 980 | 574 | 300 | 637 | 150 | 703 | | | | 831 | | 897 | |
| 509 | 125 | 575 | 1250 | 638 | 360 | 704 | 365 | 768 | 330 | 832 | 1750 | 898 | 111 |
| 510 | 150 | 577 | 780 | 639 | 225 | 705 | 400 | 769 | 195 | 833 | 275 | 899 | 400 |
| 511 | 340 | 578 570 | 230 | 640 | 310 | 706 707 | 150 | 770 | 245 | 834 | 900 | 900 | 660 |
| 512 | 225 | 579 | 230 | 641 | 200 | 707 | 350 | 771 | 175 | 835 | 110 | 901 | 235 |
| 513 | 75 275 | 580 | 230 | 642 | 400 | 708 | 100 | 772 | 1220 | 836 | 400 | 902 | 135 |
| 514 | 375 | 581 | 230 | 643 | 360 | 709 | 90 | 773 | 1250 | 837 | 220 | 903 | 340 |
| 515 | 500 | 582 | 230 | 644 | 450 | 710 | 75 | 774 | 140 | 838 | 75 | 904 | 175 |
| 516 | 100 | 583 | 575 | 645 | 1650 | 711 | 100 | 775 | 100 | 839 | 715 | 905 | 175 |
| 517 | 170 | 584 | 250 | 646 | 410 | 712 | 150 | 776 | 2670 | 840 | 200 | 906 | 75 |
| 518 | 500 | 585 | 2250 | 648 | 600 | 713 | 200 | 777 | 1200 | 841 | 550 | 907 | 115 |
| 519 | 660 | 586 | 380 | 650 | 610 | 714 | 100 | 778 | 140 | 842 | 250 | 908 | 55 |
| 52 0 | 3000 | 587 | 400 | 651 | 280 | 715 | 100 | 779 | 200 | 843 | 610 | 909 | 111 |
| 521 | 500 | 588 | 310 | 652 | 500 | 716 | 145 | 780 | 650 | 844 | 100 | 910 | 75 |
| 522 | 400 | 589 | 380 | 653 | 400 | 717 | 140 | 781 | 100 | 845 | 150 | 911 | 100 |
| 523 | 71 | 590 | 670 | 654 | 300 | 718 | 150 | 782 | 675 | 846 | 150 | 912 | 135 |
| 525 | 185 | 591 | 250 | 655 | 220 | 719 | 120 | 783 | 356 | 847 | 250 | 913 | 50 |
| 526 | 100 | 592 | 250 | 657 | 135 | 720 | 125 | 784 | 1170 | 848 | 150 | 914 | 200 |
| 527 | 310 | 593 | 1200 | 658 | 210 | 721 | 100 | 785 | 145 | 849 | 440 | 915 | 130 |
| 528 | 900 | 594 | 230 | 659 | 165 | 722 | 308 | 786 | 125 | 850 | 615 | 916 | 75 |
| 529 | 750 | 595 | 350 | 660 | 340 | 723 | 150 | 787 | 300 | 851 | 180 | 917 | 126 |
| 530 | 131 | 596 | 300 | 661 | 175 | 724 | 125 | 788 | 200 | 852 | 1010 | 918 | 91 |
| 532 | 200 | 597 | 185 | 662 | 220 | 725 | 140 | 789 | 530 | 853 | 600 | 920 | 110 |
| 533 | 500 | 598 | 1325 | 663 | 150 | 726 | 110 | 790 | 2500 | 854 | 250 | 921 | 110 |
| 534 | 525 | 599 | 215 | 664 | 225 | 727 | 90 | 791 | 6100 | 855 | 200 | 922 | 145 |
| 535 | 525 | 600 | 500 | 665 | 180 | 728 | 600 | 792 | 90 | 856 | 660 | 923 | 100 |
| 536 | 85 | 601 | 330 | 666 | 255 | 729 | 1050 | 793 | 500 | 857 | 150 | 924 | 660 |
| 537 | 300 | 602 | 250 | 667 | 275 | 730 | 110 | 794 | 450 | 858 | 85 | 925 | 440 |
| 538 | 330 | 603 | 68 | 668 | 230 | 731 | 220 | 795 | 125 | 859 | 80 | 926 | 250 |
| 539 | 400 | 604 | 400 | 670 | 168 | 732 | 110 | 796 | 725 | 860 | 80 | 927 | 125 |
| 540 | 1100 | 605 | 550 | 671 | 200 | 733 | 90 | 797 | 1980 | 861 | 100 | 928 | 2350 |
| 543 | 80 | 606 | 155 | 672 | 700 | 734 | 155 | 798 | 150 | 862 | 90 | 929 | 85 |
| 544 | 180 | 607 | 950 325 | 673 | 400 | 736 | 310 | 800 | 125 | 863 | 80 | 930 | 85 75 |
| 545 | 96 | 608 | 325 | 674 | 340 | 737 | 245 | 801 | 250 | 864 | 55 220 | 931 | <i>7</i> 5 95 |
| 546 547 | 380 | 609 610 | 230 255 | 675 676 | 220 331 | 738 739 | 510 155 | 802 803 | 125 165 | 865 866 | 220 100 | 932 933 | 175 |
| 547 | 210 | 610 | | | | | | | | | | | |
| 548 540 | 240 250 | 611 612 | 385 255 | 677 678 | 135 350 | 740 741 | 170 210 | 804 805 | 220 150 | 867 868 | 315 640 | 934 935 | 100 190 |
| 549 550 | 100 | 613 | 255 180 | 679 | 200 | 741 | 115 | 806 | 285 | 869 | 1700 | 936 | 95 |
| | | | 650 | 680 | 200 | 742 | | 807 | 510 | 870 | 100 | 937 | 150 |
| 551 | 275 2 7 5 | 614 615 | 1725 | 681 | 245 | 743 | 130 80 | 808 | 175 | 871 | 125 | Σ | 169392 |
| 552 | | | 1000 | 682 | 250 | | 220 | | 250 | 872 | 130 | 2 | 109392 |
| 553 554 | 2 7 5 | 616 | 400 | 683 | 470 | 745 746 | 155 | 809 811 | 1925 | 873 | 100 | 1 | |
| 5 54 | 300 | 617 | | 684 | 200 | 746 | | 812 | 1200 | 874 | 550 | | |
| 555 | 310 | 618 | 560 750 | 685 | 200 | 747 | 310 230 | 812 | 500 | 875 | 160 | l | |
| 556 557 | 360 | 619 | | | 250 250 | 748 | 230 310 | | 350 | 876 | 165 | | |
| 557 | 340 5310 | 620 | 440 62 | 686 687 | 200 | 751 | 535 | 814 815 | 600 | 877 | 475 | | |
| 558 | 5310 | 621 | 62 100 | 688 | 532 | 751 | 200 | 816 | 675 | 878 | 605 | ļ | |
| 559 | 2 75 0 340 | 622 623 | 150 | 689 | 275 | 753 | 465 | 817 | 440 | 879 | 425 | | |
| 560 561 | | | 1100 | 690 | 385 | 754 | 250 | 818 | 475 | 881 | 110 | 1 | |
| 561 562 | 1250 | 624 625 | 660 | 691 | 660 | 755 | 850 | 819 | 150 | 883 | 50 | | |
| 562 563 | 1100 | | 950 | 692 | 200 | 756 | 300 | 820 | 125 | 884 | 75 | | |
| 563 | 85 265 | 626 | | 693 | 255 | 757 | 235 | 820 | 450 | 886 | 95 | | |
| 564 | 265 | 627 | 850 | 073 | 233 | 1 '3' | 233 | 021 | 450 | 556 | 73 | 1 | |

NOTES ON THE PRIVATE TOKENS, THEIR ISSUERS AND DIE-SINKERS

continued . . .

LANCASHIRE.

There are two specimens of the penny-size which, as they bear no evidence whatever of any currency value, must be regarded either as medals, or as intended for private distribution; and but for the fact that they are dated one year before the "Hackney promissory Token," I should have no hesitancy in classing them as private tokens; the one issued by a Liverpool man, having, except for the fact of the date, equally as good a claim as the penny of Matthew Young.

Lancaster.

Obverse.—Within a grained border, a view of a fortress and trees.

Legend.—LANCASTER CASTLE. The "L" of Lancaster is some distance from the trees.

Reverse.—Within a grained border, a view of part of a bridge over a river; at the end, a building with eight pillars supporting the roof.

Legend.—LANCASTER BRIDGE. Part of the "E" of "Bridge" is merged in the roof of the building.

Exergue.—A · SEWARD &, below, 1794.

Edge.—Plain, in collar. In white metal.

Obverse.—From the same die as the last.

Reverse.—Very similar to the preceding, but the "E" of "BRIDGE" is just clear of the roof.

Edge.—Plain, in collar. In white metal. Fig. 26.

Obverse.—Very similar to the preceding specimens, but the "L" of "LANCASTER" is close to the trees.

Reverse and edge, as last.

There are specimens in copper, copper-gilt, and white-metal.

In the *Universal British Directory* of 1790, Abraham Sewart (sic) is described as a brass and bell-founder, Market Street.

Thomas Harrison of Chapel Road, was the architect for the bridge and also for certain alterations and additions to the castle. The bridge is 549 feet long, and at the time it was built, was said "to be one of the finest of its size in Europe"; it cost £12,000 and was erected at the expense of the county.

Leicestershire.

Liverpool.

The following in white metal was issued by Robert Preston, goldsmith, jeweller, and perfumer, 13, Castle Street.

Obverse.—Within a plain narrow border, to the right, a figure representing Minerva resting against an oval shield, bearing the arms of Liverpool. To the left an almost nude female figure winged, in the act of withdrawing a covering from the shield; a roped anchor, and oak branches in front of the shield: on a displayed scroll, on which both the figures stand, the motto, ARTS EMBELISH (sic) LIFE, below the anchor, in small letters, T: WYON: F.

Reverse.—Within a wreath, in four lines PRESTONS ARTISTS REPOSITORY. 1794.

Inner legend.—Within a fine beaded circle, PAINTINGS . ENGRAV-INGS & MUSICAL INSTRUMENTS . �

Outer legend.—Within a narrow raised rim, PLATE & PLATED WARES · JEWELRY · WATCHES · CHINA · CUT GLASS & CUTLERY, &c.

Edge.—Plain, in collar.

This piece has been described as a "card of address" or "trader's ticket" by reason of the reference to the trade of the issuer, but the same charge might with equal force be advanced in reference to the pennies of Matthew Young and Robert Orchard, also the halfpennies of P. Ratley, R. Summers, and others; strictly speaking, all trade reference should be kept from the design of a "Private Token" issued for exchange or gift.

LEICESTERSHIRE.

Elmsthorpe.

Obverse.—A view of a ruined building.

Legend.—RUINS OF ELMSTHORPE CHURCH. Exergue.—1800 and the die-sinker's initial "H" for Hancock in the left hand corner.

Reverse.—A wheatsheaf, plough, and harrow.

Legend. — HALFPENY (sic) PAYABLE BY RICH! FOWKE.

Exergue.—In two lines—GOD SPEED THE PLOUGH—

Edge.—Plain, in collar. Fig. 27. (No. 2.)

Of this interesting token eighteen were struck in copper-bronzed, and three in silver. There are three proofs in tin; the obverse being

Private Tokens.

from another die on which the final "E" of "ELMSTHORPE" is omitted. The reverse is from the die in an unfinished condition, before the motto in the exergue was added. Fig. 27.

This is the only instance of a private token being issued by a farmer. The issuer, Richard Fowke, was a self-educated man, of quaint and remarkable manner, who took a great interest in the ruins of the old church.

In the year 1800, Elmsthorpe consisted of only four houses, it was a rectory, though a sinecure.

Richard Fowke compiled a manuscript chronicle of local antiquities and history, commencing with—"The Creation of the World, and of Elmsthorpe." His token was illustrated in the Gentleman's Magazine for January, 1801, and in the same magazine, for December, 1815, appears his obituary notice, he having died on December 1st, in his 70th year; he is said to have had the finest collection of coins and medals in Leicestershire. On several occasions he sent contributions to the pages of that popular magazine.

Norfolk.

Norwich.

Joseph Hardingham issued a private token of the halfpenny size.

Obverse.—A male bust to left.

Legend .- GEORGE FREDERICK HANDEL.

Reverse.—A view of a building.

Legend.—NORWICH CATHEDRAL. Exergue.—1797.

Edge.—Incuse, and struck in collar. PAYABLE BY HARDINGHAM.

MUSICIAN + + Fig. 28.

About forty-eight specimens were struck. In some instances the edge-reading is almost obliterated. There is a very rare variety from a slightly different obverse die, showing the hair further from the ear.

Although the Norwich Musical Festival only dates from 1824, there has been an annual cathedral sermon for the benefit of the hospital, since 1779, on which occasions special musical performances were given. By means of the designs of the obverse and

Northumberland.

reverse, the issuer establishes a connection between music, as represented by the bust of the eminent composer, and the cathedral, by a view of its west front. Specimens of this token realized, by sale, nine shillings each previous to 1801.

The tokens were struck at Kempson's Button manufactory, Willetts being the die-sinker. The obverse die, with the bust of Handel, was used with the dies of the "Coventry Buildings" to produce a number of rare sets, those having this reverse being far scarcer than those with Kempson's original reverse, viz., "The arms of Coventry," and date, 1797. These sets of "Building-tokens" were made for sale to collectors.

NORTHUMBERLAND.

William H. Mather, of Newcastle-on-Tyne, hardwareman, issued two gross of what are regarded as penny tokens. Pye engraved the design on his plate No. 38, in the 1801 edition, and because of this it has been regarded as a token for currency, though there is no statement of any face value on either obverse or reverse.

The facts that it was issued in 1797, the year of the issue of the Soho copper currency, that only two gross were struck, and that the majority were in yellow metal, all indicate that the issue was for some other purpose than currency; the advertisement of Mather's trade, on the reverse, is on a parallel with that on the private token of Matthew Young. The design and execution of the obverse are of so excellent a character, that, till definite evidence is forthcoming to establish its claim to be a penny token for currency, I must class it as one of those issued for gifts to friends, if not actually as a private token.

Obverse.—Justice supporting a shield, on which are a key and anchor crossed, a ship at sea in the distance.

Legend. — JUSTICE RESTING ON THE EMBLEMS OF SECURITY , this within a rim, a circle surrounding the design.

Reverse.—Within a circle, in six lines MATHER IRONMONGER DEALER IN HARDWARE STOVE GRATES ETC.

Legend.—NEWCASTLE UPON TYNE 1797 within a rim.

Edge.—Plain, in collar. Fig. 29.

Private Tokens.

There are a few specimens struck in tin. Another variety has a different reverse, viz.

Reverse.—In eight lines. MATHER FURNISHING IRONMONGER HARDWAREMAN AND PATENT STOVE GRATE MANUFACTURER N° 14 DEAN STREET NEWCASTLE UPON TYNE.

Edge.-Plain, in collar.

The design of the previous reverse is much neater than this, which no doubt was the first idea, and was not approved. The dies for Mather's token were the work of Wyon at Kempson's manufactory.

STAFFORDSHIRE.

Lichfield.

A token of the penny size was issued by Richard Wright.

Obverse.—A male bust to left in old-fashioned attire. I.G.H. the initials of John Gregory Hancock, the die sinker, on the truncation. Inner legend.—RICHARD GREENE.

Outer legend.—COLLECTOR OF THE LITCHFIELD MUSEUM DIED JUNE 4 1793 AGED 77.

Reverse.—A view of a porch with double doors.

Legend.—WEST PORCH OF LITCHFIELD CATHEDRAL. Exergue—1800. The legend on the obverse and also on the reverse is surrounded by a rim.

Edge.—In raised letters—PENNY TOKEN PAYABLE BY RICHARD WRIGHT LITCHFIELD. Fig. 30.

From these dies six dozen tokens were struck at Kempson's manufactory. There are also a few impressions in copper from the unfinished obverse die. The dies were destroyed.

Richard Greene was an apothecary, and the founder of a valuable museum in Lichfield. The porch, represented on the reverse, is supposed to be one of the finest examples of architectural work of its kind in the kingdom.

During the Civil Wars, the Cathedral was captured by the Parliamentary forces, and used as a stable.

The proprietor, or issuer of this token, was Richard Wright, of

Staffordshire.

Lichfield, a numismatist and antiquary. The contents of Greene's museum ultimately passed into his possession.

Tamworth.

Obverse.—A view of a church and a castle on a hill. WYON. the diesinker's name is seen in small letters on the groundwork.

Legend.—CHURCH AND CASTLE. Exergue.—TAMWORTH.

Reverse.—The initials of the issuer, F.B. in script capitals.

Legend. — DEUS NOBIS FIDUCIA. Exergue. — HALFPENNY TOKEN MDCCXCIX.

Edge.-Plain, in collar. Fig. 32.

The Rev. Francis Blick was the issuer of this token, of which six dozen were struck in copper-bronzed, and a few in silver. There is in my collection a specimen struck in tin before the dies were finished, the pinacles on the church tower being higher than those on the approved design. A silver proof is also in evidence. In the church is a memorial tablet to Mr. Blick.

John Harding, a calico printer, issued a private token of the penny size.

Obverse.—A view of a castle and trees. (A rainbow-like a die-flaw over the main tower.)

Legend.—TAMWORTH CASTLE. Exergue.—EAST VIEW 1799 "HANCOCK," the name of the die-sinker, appears in minute letters on the exergue line, to the left.

Reverse.—View of a building, etc.

Legend.—TOWN HALL REBUILT BY THOMAS GUY. Exergue.— TAMWORTH 1701.

Edge.—In three separate labels or sections.

PENNY TOKEN PAYABLE AT THE HOUSE OF JOHN HARDING CALICO PRINTER TAMWORTH

Between each section are implements of the trade; all in relief, by means of an engraved split collar. Fig. 31.

Forty-eight impressions in copper were taken, and six in silver. There are three impressions in copper with a plain edge, one being struck on a larger flan than the others. Also two impressions in copper

Private Tokens.

from the obverse die in a partly finished state, and one in tin after the obverse and reverse dies had been finished except for the legends. The last has a plain edge in collar.

John Harding was a token collector, and his specimens ultimately were sold to Sir George Chetwynd.

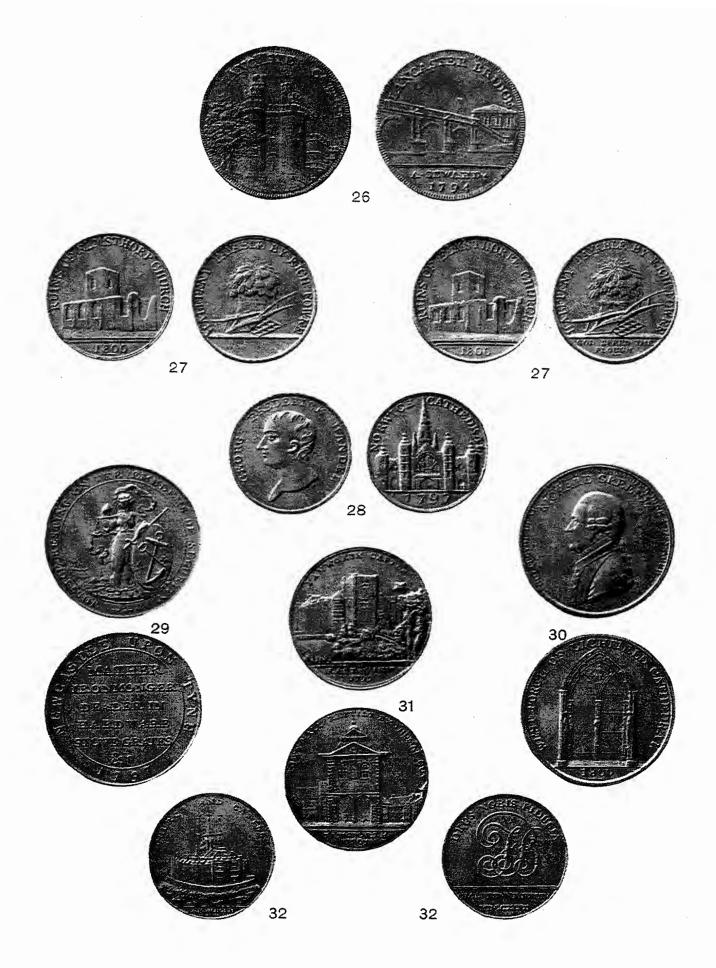
Tamworth Castle is an interesting old building, in which there is a large quantity of old oak wainscotting and heraldic panels. Thomas Guy was the founder of Guy's Hospital, London; he also built and endowed a hospital and almshouse at Tamworth for fourteen poor men or women.

The will of Thomas Guy terminates as follows:—"declaring this to be my only last will and testament, in witness whereof; I have to the same contain'd in seventeen sheets of paper, and to one other part thereof, contained in eleven sheets of paper, set my hand and seal, etc., on this fourth day of September, Anno Domini 1724."

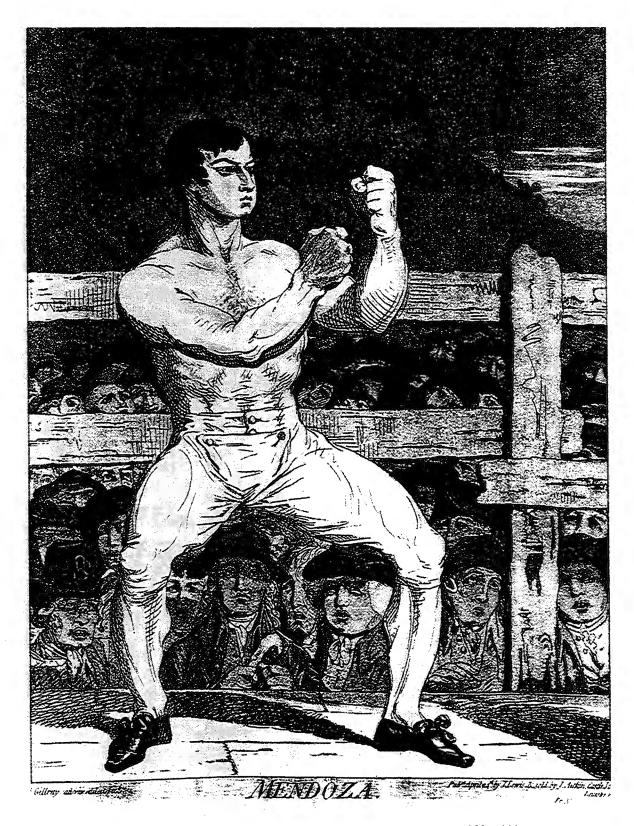
The witnesses thereto being:-

John Oldfield, William Pepys, John Adlam, Samuel Adlam.

(To be continued.)



PRIVATE TOKENS



*** Pictures & captions from Noble Art by Tom Sawyer, 1989 ***



THE PUGILISTS





NSON. PERRINS.

For me the British Provincial Tokens are a window to the late Eighteenth Century society. This is particularly true when it comes to the entertainment world of the 1790's. After the theatre and horse racing, the most popular entertainment was the sport of boxing. With the Conder tokens we have three pugilists depicted as busts: Isaac Perrins, (Warw.#12); Thomas Johnson, (Warw.#13) and Daniel Mendoza, (Mid.penny, #34-35 & 1/2 penny #785/789.) Although there is much less information on Perrins and Johnson, there is however an abundance on Daniel Mendoza.

Though I found the story of these bare knuckle pugilists fascinating, I have never been a boxing aficionado. Not so, for my grandfather who was born in the 1880's. I clearly remember when I was about seven years old he bet me a nickel on a Joe Louis bout. With the 8th Marquess of Queensbury, (1844-1900), and his boxing rules initiated in 1867 and with the introduction of padded gloves (muffles) the sport changed dramatically. Incidently, boxing gloves may be responsible for more concussions since bare fist pugilists ran the risk of getting broken fingers with blows to the head and therefore threw more body punches. Also fights more often ended in exhaustion by one of the participants rather than going for the dramatic knock out blow. Initially fights were fought in an open field with the crowd forming the fight circle. Later on it became more practical to erect a stage which was often much larger than the ones used today. A chalk line was drawn on the wooden floor, and any failure to be able to reach the line of combat after a separation or knock down was a cause for defeat. There were no timed rounds for breaks came only when a man was down or being attended to. A man kneeling was considered down and could not be hit. Also there was no time limit or number of rounds to a bout. In the Regency period there was one case were a fight went three hours and nineteen minutes. A fighter had half a minute to get up and return to the fray. Looking at old mezzotints of boxers and their fighting stance, they seem weird to us today, but there were several reasons for this posture. Probably less emphasis was placed on proper footwork which was a later development. Also these poses were for the artist's benefit and not exactly how they fought. But the most important reason was the pugilists were allowed to entangle legs, encircle the opponents head with his arm and punch him while he was so restrained. This was called a "Suit in Chancery." Another allowable wrestling hold was the "Cross-buttock" where the opponent was grabbed about the waist and thrown to the ground in which case the round would end. Needless to say, eyes were blackened, noses broken, lips cut; as cuts were common, and much blood was spilled which was spoken of as "claret." Pierce Egan, (1774-1849) initially a sports writer and newspaper reporter, wrote the four volumes of *Boxiana*. The first volume was published in 1812, and he was responsible for much of this prize-fighting slang. Some of his fight slang still exist to this very day. Betting was heavy, and could be altered after each round, and the contestants often placed their own wagers. And as we will see

patronage played an important part in the boxing game. In early times the seconds dressed in the same manner as the contestants, but later on in the Regency period they dress in the latest fashion with top hats! Usually there was the second who assisted the pugilist and who usually had boxing experience, while the bottle holder was responsible for attending the fighter's physical condition. For these bare fist prize-fighters, at this time, their only prize was their monetary take. Prizes of silver cups and elaborate belts did not appear until the Regency period.

HUMPHERIES & MENDOZA

A cheap wood-engraving published in London in about 1790, as part of a reading primer. The spelling of 'Humphfries' leaves a little to be desired.

As I have suggested, published information is very hard to come by for the lives of Thomas Johnson and Isaac Perrins. But for Perrins this is especially true for his life story since he was the loser. Evidently these two Warwick tokens were issued to commemorate their contest of 1789. We will hear about Mendoza later. The Bell book Political, pages 67-70 gives us extensive information about the contest between the two pugilists. Note the bottle holder for Tom Johnson, Joe Ward - we will talk about him further on. It is interesting to learn in the Bell book the nature of Perrin's character, especially after his retirement. I will not repeat the Bell pages in this article if I can avoid it. What happened to Thomas Johnson after his fight with Big Ben Brain in January of 17, 1791 was extremely typical of what happened to many ex-prize-fighters. So many of them became pub keepers or a tavern hang-about, glorifying in past events, being wined and dined by patrons, ruining their health by drink, gambling their winnings away and whoring. There were exceptions, Joe Ward or "Old Joe" was one of them. He had a Soho pub called the Green Dragon which contained a unique pugilist art gallery, and he was successful enough as a tavern owner to commission some of these pugilist portraits himself. This famous gallery was known as the "Cabinet of the Fancy", a slang tern for the pugilists. Besides the paintings of the fancies, he also had one of "The Death of Nelson" and one of "Duncan's Victory." Another exception was John Gully, (1783-1863) who remarkably became an MP. He was at the peak as a fighter in 1807, but he had only three major fights before he retired. He was a financial genius becoming a bookmaker, racehorse owner and then having his portrait painted during his term in parliament in 1833. Yet despite all this, at times he was not accepted in high society and this was typical for all the pugilists. Although the male aristocrats considered the art of boxing as an important and necessary skill for self-defense and took lessons in the sport from ex-prize-fighters, there was always a line drawn between the social ranks. It must be remembered, just as today, the motivation for professional boxing came out of the ranks of the poor who sought fame and fortune and hence an escape from poverty. Even though these common folk became famous, were admired for their "bottom" (courage) and skill, and even sometimes their wealth, they never could break into the upper classes. Some of them for the obvious reason that they were poorly educated, often times unable to read or write, but this was not always the case as we will see. Just as

today, many celebrities have ghost writers and their lives are falsified through exaggeration, so often the fancy would be presented in a much more favorable light than was justified. In many cases, the common pugilist and even some of the renowned famous ones, in actuality were crude men who could not speak the "kings" English like gentry. Some had been in some form of the military or were ex-criminals. It was not unusual for them to die in their thirties although in a few cases this was due to injuries from the fight game but not in most cases.

Prize fighting can be traced back to the Greek games before Christ, but our story starts with James Figg who ran a school for self-defense in the early Eighteenth Century. This school taught the use of the sword, the quarter-staff, and George Taylor was the boxing instructor. When the noted self-defense owner died in 1734, Taylor continued the school but it became almost exclusively a boxing establishment. Along comes Jack Broughton, (1705-1789) forming his own rival pugilist school and fights George Stevenson. But the sad part of the story is that this is a fatal bout for Stevenson. This had a horrifying impact on Broughton who collected funds for his widow. Broughton then formulates seven boxing rules in 1743, probably because of the fighter's death. With patronage his school becomes so famous he is today thought of as "The Father of Boxing."

As mentioned British gentry of the latter half of the Eighteenth Century, as sword duels dwindled in popularity, took lesson in boxing. Even the wearing of a sword became unfashionable, and fighting illegal duels were more often performed in obscure sites with pistols. One can trace Tom Jones' performances in fisticuffs through Fielding's novel as the sport of boxing with muffles becomes increasingly an exclusive English prerogative. In the middle of the century, a series of fixed professional fights marred the sports reputation, and it became illegal as a prize-fight entertainment. Prior to its becoming illegal the prominent patron of the sport was the Prince Regent, "Butcher" Duke of Cummberland, the son of George II, officially known as William Augustus, (1721-1765.) The duke was the major patron of Broughton and his "amphitheatre", but when Broughton finally was defeated the Duke lost interest, and with the Duke's death the prize-fighting aspect of the sport declined. Its return to prominence was when the Prince of Wales - the future George IV - became the primary sports patron. Because of his involvement the authorities conveniently appeared to often have a blind eye. In the Duke of Cumberland era besides Broughton, Jack Slack and Tom Smallwood were the fancies and Hogarth was the artist preferred by the fighters. In the 1780's, under the patronage of the Prince of Wales and his gambling buddies, James Gillray and Thomas Rowlandson became the caricaturist of the pugilists. Now the fancies were Joe Ward, Big Ben Brain and Richard Humphries. By the last decade of the Eighteenth Century and still under the Prince of Wales such pugilists as Daniel Mendoza, Tom Johnson, Isaac Perrins and John Jackson were the reigning favorites. By now the chicanery and fixed fights of the past had been forgotten and the sport of prize-fighting was restored to new heights.

The greatest period of bare fist prize-fighting, however; was during the Regency Period after 1800. Since this is getting beyond our decade of interest I will try and keep the story short. There was a major decline starting in 1822 and continuing into the early years of the Victorian age with a major shift being from England to America. Part of the reason was

the loss of patronage and the passing of some of the great sports writers such as Pierce Egan. The other part was because of the prevailing Victorian attitudes. The next most



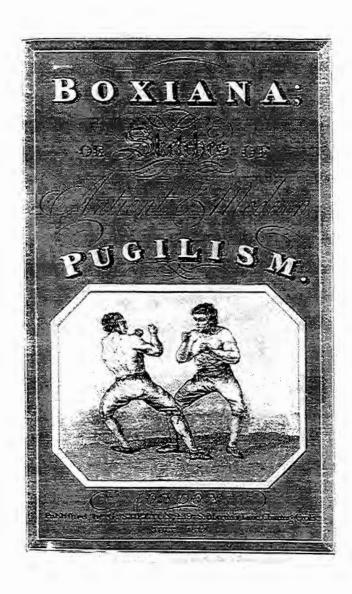
Boxeurs' by Theodore Géricault.
The poses adopted by the protagonists in this extraordinary lithograph of C1818, owe much to the frontispiece of the then popular Boxiana.

notorious and publicized fights after the three Humphries vs. Mendoza bouts in the last decade of the 1700 hundreds, was the Cribb vs Molineaux fights, the second being in 1811. Tom Molineaux was an American black man and Tom Cribb, (1781-1848) was the reigning champion of England. In the earlier fight between Cribb and Molineaux, Molineaux was defeated but not without controversy, and soon he offered a challenge for a rematch. In the first fight Malineaux, who was a very large black man and though powerful, he lacked finesse. In the second fight his "science" was much improved. By the end of round two the claret was flowing from Cribb's mouth and his right eye was completely closed. However in later rounds the black man seemed to lose steam after receiving a hard body blow. By the ninth round it was clear who the winner would be. With Cribb's win it appeared Malineaux had broken his jaw and had some broken ribs. This was clearly the most famous fight of the Regency "Golden Age" of prize-fighting. Several paintings were reproduced, Staffordshire jugs with the fighting pugilist in combat were issued, and many other souvenirs manufactured. Other pugilists to look up if one is interested in this period, are the brothers Jem and Tom Belcher who brought to the ring a new style of fighting. Jack Randall, called "The Nonpreil", was one of the best. Tom Hickman, know as "The Gasman", who was to died in a drunken carriage accident in 1822. William Hazlitt wrote about him. Hazlitt rode to the fight of Gasman and Ned Neal with John Thurtell, a fight-promoter and soon to be convicted murderer, who was thinly disguised with an alias as Tom Turtle, and who is seen later to go to the gallows in his sportsmen "Belcher" necktie. (Just a tease to a very intriguing murder story of this period.) Most of the pugilists had some sort of a nom de guerre. Then there is Tom Spring, incorrectly known as "Tom of Bedford", whose real name was Winter. And Ben Caunt who was a close friend of Charles Lamb. Or Dan Dogherty who fought the younger Belcher, and who was touted by Lord Byron, and who lost to Byron's financial regret. Interestingly, during George IV's coronation, he hired eighteen pugilists dressed as pages to be his body guards. Most of the above surely must have done this duty, and we know John Jackson was one of them.

Before I can close with the Regency period there is one last piece of information that needs to be told. Lord Byron, as any student of him surely knows, was a firm boxing enthusiast. He used boxing as a form of physical exercise to keep himself in shape. There is a crude illustration by Pierce Egan junior, done to please his father, showing Byron in sparring practice with muffles on. Lord Byron had a famous dressing screen containing a montage of famous pugilists including the even then valuable Rowlandson drawings. But the most significant aspect of Byron's enthusiasm was his friendship and comments on his boxing instructor "Gentleman" John Jackson, (1768-1845 @ 77). By the way, Jackson's tomb is still in existence in London's Brompton Cemetery. The ex-champion was the leading teacher of the peerage in this nobel art of boxing. Jackson had been a boxer during the early period of the Prince of Wales patronage. He was another one like Gully who managed to keep his career to only three major fights - very smart! Jackson's last fight was with Mendoza, whom he beat - we will hear more about this fight later. The outcome was that Jackson was the champion from 1795 to 1803 - eight years. The Byron / Jackson friendship lasted until Byron's self-exile from England in 1816. Byron thought highly of the "master" Jackson, indicating he still retained his athletic form and good humour.

Now it's time at last to turn our attention to the remarkable Daniel Mendoza, "The Jew" (1764-1836.) Like Tom Johnson and Isaac Perrins, I refer you to the Bell books, in this case to the Specious one, pages 175-177. First off it must be stated Mendoza wrote his own autobiography - at least based on the extensive puffery in it, we can assume it's from his own hand. His autobiography, Memoirs of the Life of Daniel Mendoza, was first published in 1816 and has been re-issued by Paul Magriel (ed) in 1951. There was at least three public contests between Richard Humphries and Mendoza, 1788, 1789, and 1790. There appears to have been a bitter rivalry between them, yet we can not be certain because some rivalries were manufactured. In particular because Mendoza had trained in Humphries stables and under his tutorage. In the first fight, the interesting episode was when Tom Johnson, Humphries second, took a potentially knock-down blow to the ribs by interposing himself between Mendoza and Humphries thus saving his companion. This event was immortalized by Gillray's painting of "Foul Play." It is interesting to note Gillray realistically illustrated his art work when doing fights rather than with his usual caricatures. After fighting half an hour, Mendoza probably slipped on the rain soaked stage and badly sprained his ankle. One for Humphries. The next two went to Mendoza. These fights were undoubtedly the contests of the century - that is the Eighteenth Century. The memorabilia, prints and write ups of these bouts were certainly the most extensive for the times. On page 95 of Dalton & Hamer, token Middlesex #35 the second head is marked as W. Ward, I am not certain who this is, but it may be Joe Ward as mentioned earlier. For example, It may have been that "Joe" was not his real first name. However, Mondoza did fight a William Warr of Bristol in May 1792 and again in November 1794 beating him both times. In any case Mendoza, now as the champ was no chump and wisely milked his success for all it was worth - in money! He toured the United Kingdom demonstrating his techniques for a fee. Since boxing was still officially illegal he was clever enough to sell pictures of himself for half a crown which also entitled a person to free admission to his sparring rooms. Like so many others, Mendoza became a publican and owned the Admiral Nelson tavern in Whitechapel. Daniel Mendoza was something special as a pugilist, he was not a big brut of a man, so for the first time in boxing history we meet a scientific boxer with astonishing quickness. In fact, he published an article called, "The Art of Boxing" in 1789 on this concept. Mendoza held the championship from 1789 until he fought John Jackson in April 1795. In this fight, to the unfortunate discredit of the otherwise great "Gentlemen" Jackson, he caught Mendoza's beautiful shiny black locks and threw him down. In the fifth round and after less than twelve minutes Jackson was champion of England - unfair? According to the literature, Mendoza's last public fight in the ring was with Tom Owen, a young man in 1820 who defeated the "old man" of 56! This was a man who died in 1836 leaving behind a wife who bore him eleven children. Mendoza was twenty and five, as they say, when he became Champion, but he looks about nineteen in Jean Robineau's full-length portrait, (the included oval of 1789, engraved by Hotchkin.) Needless to say, there are many pictures of Mendoza, and I am unable to include them all in this article. But the most important one is he and Humphries in a fighting stance illustrated on the title page of the first issue of Egan's Boxiana published in July, 1812. And from Bell's book, we discover Mendoza died at seventy-two, and this was most unlikely from abusing drink.

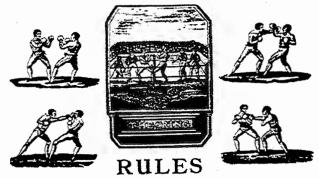




Broughton's Rules of 1743, an earlynineteenth-century broadsheet, decorated with wood engravings. Broughton's rudimentary code was to govern prize-fighting for almost a century.

Title page from the first volume of Boxiana, published in 1812.

Mendoza and Humphries are depicted in attitude' after a painting by Charles Ryley. The classical poses of the rival pugilists in this engraving, in turn, inspired Theodore Géricault's 'Boxeurs'.



TO BE OBSERVED IN ALL BATTLES ON THE STAGE

- That a figurare of a Yard be challed in the middle of the Suppr: and on every feeth fertoafter a fall, or being pured from the male, wal-Second is to bring his Man to the fishe of the Guarae, and place him opposice to the other, and all they are fairly feet-out the Lines, is shall not be haviled for once to shall are the order.
- 11 That, in order to prevent any Disputes, the once a bilan lies after a fall, if the Second does not bring his Man to the fide of the figure, which the space of half a sinure, he first he deemed a housen Man.
- 11. That is every main bistile, so person whatever fluil be upon the Stage, accept the Principals and their Seconds; the fame rule to be observed in Dyebatics, except that in the latter, Mr. Hroughton in allowed to be upon the Stage to keep decroun, and to safisk Geneliemen in geeing to their places, and whose provided always the door not inserted in the Bastile, and whoever precends to infiringe their Rules to be turned immediately out of the housic. Every body is to quit the Stage is from in the Chatapions.
- V. That no Champson he deemed beacen, unless he fails coming up to the line in the limited time, or that his own Second declares him heaten. No Necond is no ballowed to alk his man's Adversary any questions, or advise him to give out.
- 7. That in bye-batties, the winning man to have two-rhinds of the Money given, which thall be publicly divided upon the burge, notwithfunding any private agreements to the contrary.
- VI. That to prevent Difputs, in every main Battle the Principals flail, on coming on the Stage, choose from among the greateness perfect row Umpires, who shall abfolutely decide all Disputs that may arise about the Battle; and if the two Umpires cannot agree, the faid Umpires to choose a third, who is no determine it.
- VII. That no person is to bit his Adversary when he is down, or seize him by the hum, the breeches, or may pure below the wailt: a man on his kness

As agreed by feveral Configures at Broughout's Amphiliant.
Testimone Court, Road, August 65, 1743.

TOKENS OF THE TIMES: Matthew Boulton's Efforts for Enniscorthy

As the eighteenth century ended and the nineteenth century began, Matthew Boulton might have been pardoned for taking a modest pride in what he had recently accomplished. His home town had once had a deserved reputation as the center of the British counterfeiting industry. Now, due to his enterprise and genius, Birmingham was gaining renown as the source of new, safe copper coinage of full, honest weight, created by a battery of machines which were the despair of the forger. So Matthew Boulton might have been excused if he had rested on his laurels. But he didn't; because he couldn't.

The 'Cartwheel' pennies and twopenny pieces, so proudly introduced in the summer of 1797, were fading from commerce within a few years of their issue. Their copper content made them excellent money when times were stable. But times were *not* stable at the close of the decade: Britain's deepening war with Revolutionary France inspired hoarding of all money, including copper coins, and the metal's usefulness in warfare meant that demand for it constantly outstripped supply. Inevitably, copper's value rose - and tons of the pence and twopence which Matthew Boulton had so carefully made were soon consigned to the melting pot. That was why the coiner's future regal issues would contain less copper than his first efforts, and why he was forced to turn official coiner again, like it or not. And that was why a smattering of light-weight provincial tokens continued to be launched into commerce even after the appearance of Boulton's coinage. Most were launched in Great Britain. But some were launched in Ireland.

There, the political, economic, and social situations were particularly complex. A goodly number of the island's people simply wished the English would go away. The latter had no intention of doing so: many of them had family roots in Ireland going back half a millennium, and they had no desire to hand over 'their' island to a race of Celts who also happened to be Catholics. French agents thoughtfully stirred the pot (and in truth, the pot needed relatively little stirring): the result was a revolt, in 1798. Hopeful patriots rose in Dublin, and they were joined by desperate peasants in the south. The insurgents captured several towns, including Enniscorthy. They then established a large training camp at a place called Vinegar Hill, a mile or two east of the town of Wexford. Nearly six thousand of them trained there, doing what they could to get ready for the inevitable clash. Some drilled with muskets supplied by the French; but the majority had to be content with pikes. They

thought they were bound for glory; but they were bound for disaster.

The rebels had sacked Enniscorthy late in the spring of 1798. The following June, the English General Lake attacked *them*, striking at their base of operations. Caught off guard, the half-trained patriots were routed. Many were killed, and R. C. Bell relates that the bodies of five hundred or so were buried in a large pit at the foot of Vinegar Hill. The island sullenly returned to its role as England's oldest and closest colony.

All of this would find reflection on Matthew Boulton's Enniscorthy token.

There and in the rest of the island, a shortage of exchange media had exacerbated public discontent and inspired private money. There had not been a plentiful, regal circulating medium for many years. Instead, eighteenth-century Irishmen had to made do with English precious-metal coinage, occasionally received; with regal copper issues struck specifically for the island (manufactured at the Royal Mint when the London authorities remembered to order it, or, in one disastrous experiment in the 1720s, by a private coiner on contract)¹; with counterfeits of the various regal copper issues; with bank notes of various kinds (with which most people had little if any contact); and with several generations of tokens. We have already discussed one token in which Matthew Boulton had a hand, a piece made for Cronebane in 1789. Now it is time to consider another.

This second piece was for a banker in Enniscorthy, a town prominent in the late troubles, and it was unique, or nearly so. It was one of Soho's most artistic efforts. It was lightweight by English standards, because it was struck to an Irish standard. It was 'hybrid', in that it bore as a date the final year of the old century but was struck during the first year of the new. Enniscorthy tokens enjoyed other distinctions: there were two different series of them, bearing two different sets of designs, made, probably, in two different centuries, and coined by two different coiners.

Matthew Boulton was one of them, and his efforts are represented by Dalton & Hamer varieties 1-4 (Wexford). As we shall see, these pieces were struck and sent in two batches in February 1801. The other coiner remains unknown, but he is represented by Dalton & Hamer varieties 5-16. While there are twelve varieties of his halfpennies to four of Boulton's, his products

¹This was the 'Hibernia' contract coinage of William Wood, struck between 1722 and 1724. It met with a violent reception in Ireland (partly because it was obviously lightweight, partly because it was foisted on a proud people without their consent). Some of it was eventually sent to the English colonies in America, where it met with greater favor.

are rare both individually and collectively. R. C. Bell (Commercial Coins, 1787-1804) hypothesizes that the coiner was unskilled, that his dies broke frequently (thus explaining the rarity of the tokens that they struck), and that he was working in Ireland rather than England, where most of the tokens in the 'Conder' series originated.

I agree with Dr. Bell on all these points. Certainly, the idea of shoddy workmanship, short die-life and resulting rarity, and suspected Irish manufacture parallels what we assume about an earlier group of tokens, the Hibernian Mine Company halfpennies, or 'Camacs'.

Bell makes a final suggestion: might the person who issued this group of Enniscorthy pieces have become so disgusted with them that he ordered the next batch from the Soho Mint? I think he did, and that the order of appearance for the two groups of Enniscorthy tokens in the Dalton & Hamer catalogue should, in all fairness, be reversed.

The difficulty is that this sequence of events is logical but currently unprovable. The person issuing the tokens was R. Woodcock, a local banker. But the Matthew Boulton Papers contain not a scrap of correspondence from or to him, correspondence concerning new token orders, old ones, or anything else. Instead, R. Woodcock (and no one has succeeded in uncovering what the 'R' stood for) did what many of Boulton's clients did and placed his orders through an intermediary. This man's name was Samuel Baker. But the only surviving letter from Mr. Baker in the Matthew Boulton Papers is a note dated 16 September 1800, introducing a Lady Campbell, who wanted to see Soho Manufactory. And this letter was dated from the Bull-Ring, which is in Birmingham. If the 'Samuel Baker' in the Soho Mint Books and the 'Samuel Baker' who wrote this letter were the same person (and the circumstantial evidence suggests that they were), we have a logical reason why no correspondence survived: there was none to begin with. If Mr. Baker had a question about Mr. Woodcock's tokens, he could stroll up to Soho and get it answered. But the probability of geographic proximity means that we shall probably never know the whole truth about the Enniscorthy tokens.

For Matthew Boulton's part in them, we must turn to several of the Soho Mint Books. By way of compensation for the lack of other sources of information, they will tell us precisely how many Enniscorthy pieces were struck, and when they were sent out. For example, an entry in MBP44 (Mint Day Book, 1799-1801) under date of 7 February 1801 recorded the dispatch of five casks of Enniscorthy halfpenny tokens to a local wharf for transshipment to Ireland, with a charge to Samuel

Baker of £176.16.4 (£137.4.4 for the copper, £38.13.7 for coining expenses, and £0.18.5 for casks). The notation, to be found on page 240 of this Mint Book, adds that the pieces were struck at fifty-eight to the pound, and that they were shipped in 2,283 paper rolls containing fifty-two pieces each.

The odd weight and number of pieces in each roll can be explained by the fact that these tokens were for *Ireland*, not England. It took not twelve pence to make an Irish shilling but *thirteen* - so an Irish halfpenny token would naturally be lighter than an English one, and it would naturally make sense to put fifty-two of them in each roll (4×13) rather than forty-eight (4×12) .

If we do a simple multiplication, we find that 118,716 pieces left Soho in that first batch.

Twenty days later, there was a second notation in MBP44. On 20 February 1801, a much large shipment was recorded leaving Soho Mint - some twenty-three casks of Enniscorthy tokens. Again, they had been struck at fifty-eight to the pound and rolled in papers of fifty-two pieces each. This time, there were 10,319 rolls, or 536,588 tokens. In all, Mr. Woodcock would receive 655,304 halfpenny substitutes, for which his amanuensis Mr. Baker would owe nearly a thousand pounds (£176.16.4 for the first order, £790.0.5 for the second, a total of £966.16.9). Baker paid for the first order promptly enough, but he took his time paying for the second: he sent the last of several installments on 10 October 1801. The Mint Books are silent on the question of Enniscorthy proofs, but they were struck nonetheless².

Whether proofs or business strikes, the Woodcock pieces bore evocative designs that set them apart from other tokens of the day. The dies were almost certainly created by Conrad Heinrich Küchler, Soho's primary engraver at the time³. For the obverse, the designer employed an approach last seen at Soho nearly a decade earlier - that is, a central device surrounded by a raised oval area, upon which the legend appeared. The last time Soho had adopted this technique was on a series of

²It's always risky to speculate about Soho proofs where no records exist, but based on the numbers I have seen and practice adopted in other instances, I estimate that a hundred or less proof Enniscorthy halfpennies were struck by Matthew Boulton.

³As I mentioned above, we are entirely dependent on the Soho Mint Books for information on this token, and the Mint Books are largely dry recitations of pieces sent out and to whom, of the metal used in their manufacture, and how much was owing to Soho, and when. But in MBP44, immediately below the entry for the first shipment and under the identical date, notation was made of a payment of £25 to Conrad Heinrich Küchler. Might not this have been the designer's recompense for his latest token dies?

copper tokens struck for the Parisian firm of Monneron Frères in 1791-1792.

The castle was that of the town of Enniscorthy, constructed by the Normans in the twelfth century. Might Mr. Woodcock (who, in the absence of other candidates, may be assumed to have suggested the designs for his own token) have intended the scene to suggest the permanence and strength of Norman, or British, occupation of the island? I think we can make the case for such an intent, especially when we consider the reverse design.

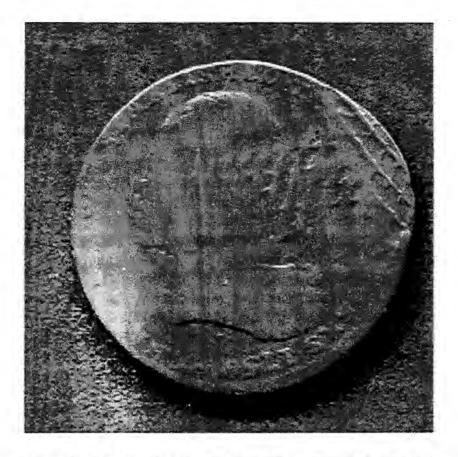
There, we see one of the oddest scenes in the entire token series - one so unusual that it must have been chosen with a good deal of deliberation. There was a shield bearing the banker's monogram, R.W., hanging from the branch of a leafless tree. In the background was a castle and three peaks. The central one was Vinegar Hill. When we contrast this lifeless scene of devastation with the obverse device, with the wind whipping the ensigns of a mighty fortress, we have, I suggest, a capsule commentary on a campaign which failed, and the fruits which it left behind.

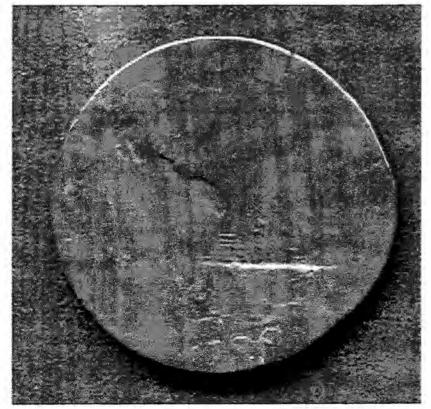
Both issues of Enniscorthy token were plain-edged. Boulton's products were struck in a collar; members of the earlier series were not. But neither Boulton nor his unnamed predecessor felt the need or had the means for lettering the edges of their pieces: the rise in the price of copper and the lighter weight of the Irish coinage made such attempts impractical.

Within a few years' time, Matthew Boulton would have secured approval for striking an Irish coinage. But meanwhile, he would manufacture one final Irish copper token, a curious piece for a nobleman in King's County. It will reintroduce an early player in the Soho story, and it will serve as the basis of the next installment in my series.



A SPECTACULAR CONDER ERROR





How did this happen? My best guess is that the token while struck was something like wire mesh heavy canvas accidentally in place across If anyone has the dies. another idea, please send a note to the CTCC Journal. Did anyone notice the error? If so, they probably didn't care because tokens were usually ordered by the hundredweight (100 It is also pounds). interesting that the token is well worn from circulation, evidently it was readily accepted as payment it's strange despite appearance! Mike Grogan CTCC #48

photos by Gord Nichols

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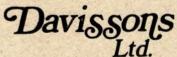
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